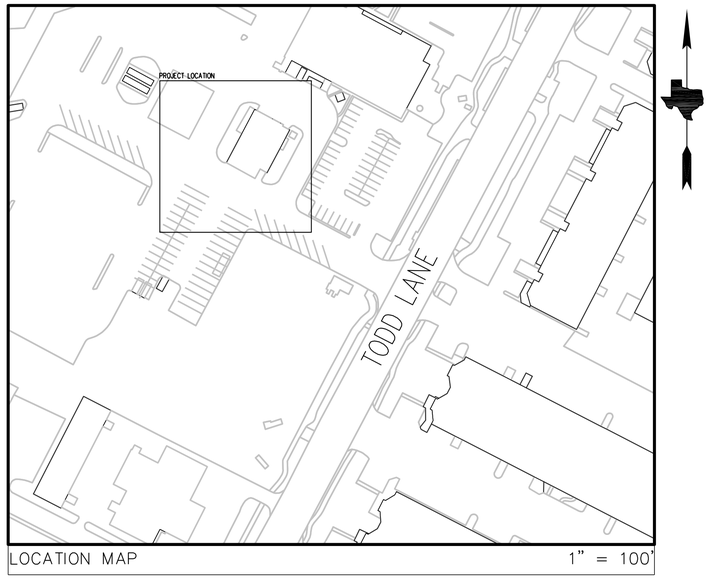
CITY OF AUSTIN, TEXAS
AUSTIN RESOURCE RECOVERY

KGSC TRUCK WASH FACILITY RETROFIT
SUB PROJECT ID: 5773.025

SHEETS:

NOTES:

1. THIS PROJECT IS LOCATED WITHIN THE WILLIAMSON CREEK WATERSHED (CLASSIFIED AS (SUBURBAN)) AND SHALL BE DEVELOPED, CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH CHAPTER 25 OF THE CODE OF THE CITY OF AUSTIN.
2. NO PORTION OF THIS SITE IS LOCATED WITHIN PARKLAND OR LAND USED FOR PARK PURPOSES.
3. NO PORTION OF THIS SITE IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN, PER CITY OF AUSTIN AND FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP(S) NO 48453C0605k, DATED 0122/2020.
4. THIS PROJECT IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AS DEFINED BY THE CITY OF AUSTIN. THIS PROJECT IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ).
5. THERE ARE NO CRITICAL ENVIRONMENTAL FEATURES WITHIN 150' OF ANY PORTION OF THIS PROJECT. A FIELD INVESTIGATION HAS NOT BEEN PERFORMED AS A PART OF THIS PROJECT.



LOCATION MAP 1" = 100'

PROJECT INFORMATION

STREET ADDRESS:
4108 TODD LANE
AUSTIN, TEXAS 78744

OWNER:
AUSTIN RESOURCE RECOVERY

SUBMITTAL PREPARED BY:
CONTACT:
MWM DESIGNGROUP, INC.
305 E. HUNTLAND DR. STE. 200
(512) 453-0767 FAX: (512) 453-1734

OWEN HARROD, AIA, LEED AP BD+C
(512) 992-2971
OwenH@mwmdesigngroup.com

REGISTERED ARCHITECT OWEN HARROD 16345 STATE OF TEXAS 25 NOV 2020

mwm Design Group
305 East Huntland Drive
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Austin, Texas 78752
p: 512.453.0767
f: 512.453.1734

TBAE FIRM REGISTRATION NO.: 1452
TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NONO.

NO.	DATE	DESCRIPTION	BY

0 1"

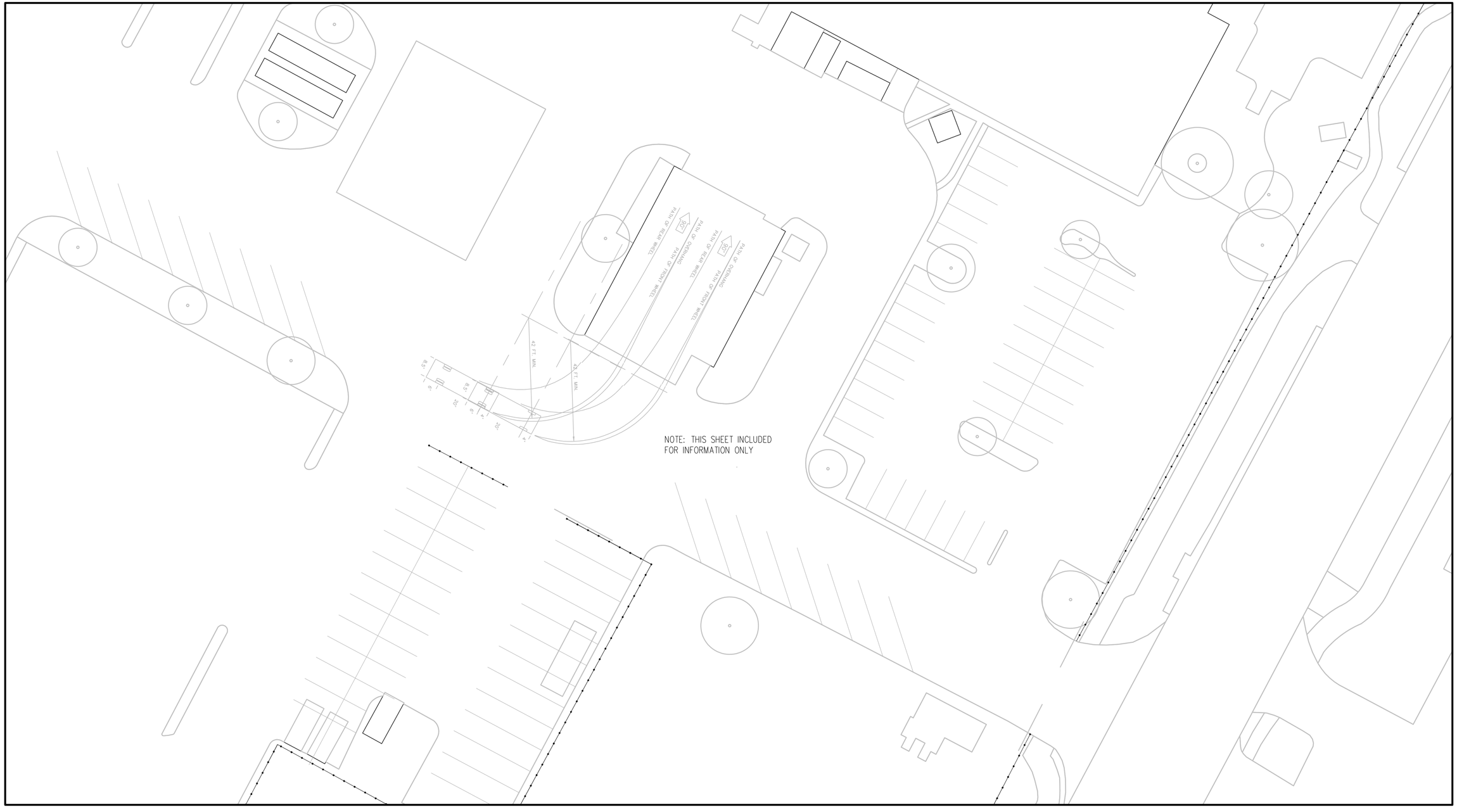
The bar above measures one inch on the original drawing. Adjust scales accordingly.

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

4108 TODD LANE
AUSTIN, TEXAS 78744

PLOTTED: 11/25/2020
JOB NO: 023-92B

A-0-00



NOTE: THIS SHEET INCLUDED FOR INFORMATION ONLY

1 A-1-01 SITE PLAN
SCALE: 1" = 20'

REGISTERED ARCHITECT RUBEN NARROD 18345 STATE OF TEXAS 25 NOV 2020

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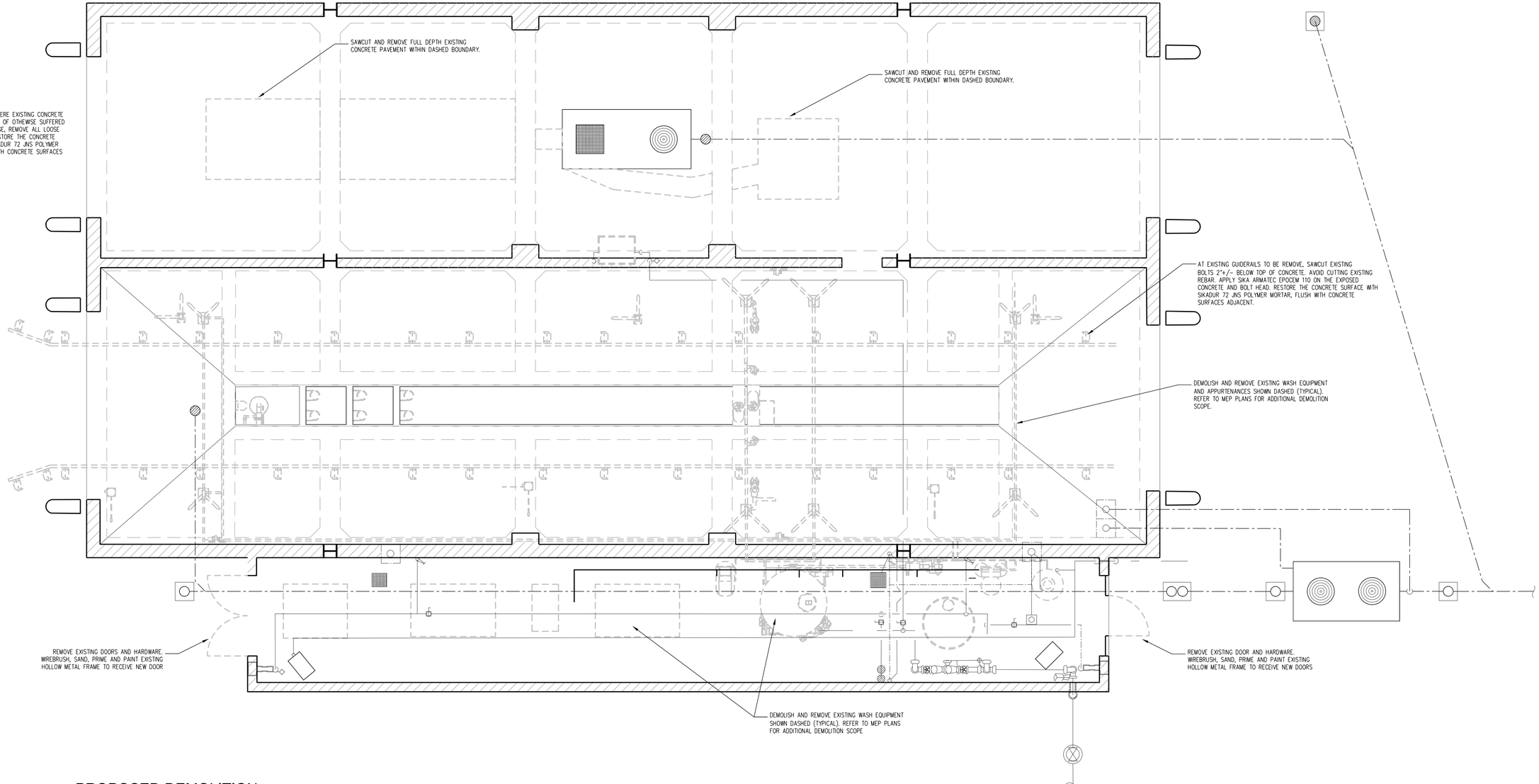
KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

4108 TODD LANE
AUSTIN, TEXAS 78744

PLOTTED: 11/25/2020
JOB NO: 023-92B

A-1-01



1 / A-1-10 PROPOSED DEMOLITION

SCALE: 1/4" = 1'-0"

REGISTERED ARCHITECT KOWEN HARRIS 16345 STATE OF TEXAS

29 JAN 21

mwm Design Group

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TBAE FIRM REGISTRATION NO.: 1452
TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NONO.

NO.	DATE	DESCRIPTION	BY

0 1"

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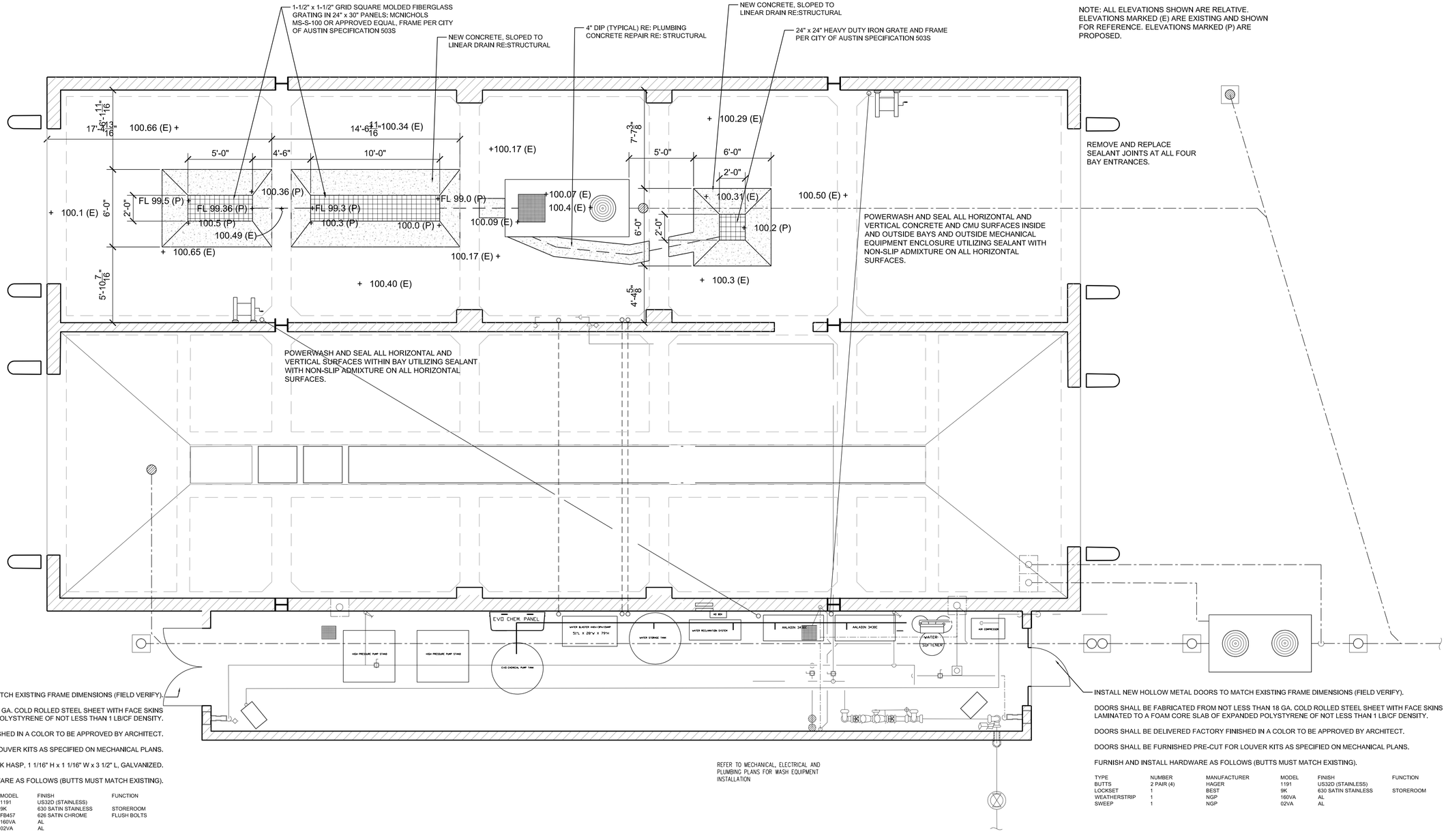
KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

4108 TODD LANE
AUSTIN, TEXAS 78744

PLOTTED: 1/29/2021
JOB NO: 023-92B

A-1-10



NSTALL NEW HOLLOW METAL DOORS TO MATCH EXISTING FRAME DIMENSIONS (FIELD VERIFY).

DOORS SHALL BE FABRICATED FROM NOT LESS THAN 18 GA. COLD ROLLED STEEL SHEET WITH FACE SKINS LAMINATED TO A FOAM CORE SLAB OF EXPANDED POLYSTYRENE OF NOT LESS THAN 1 LB/CF DENSITY.

DOORS SHALL BE DELIVERED FACTORY FINISHED IN A COLOR TO BE APPROVED BY ARCHITECT.

DOORS SHALL BE FURNISHED PRE-CUT FOR LOUVER KITS AS SPECIFIED ON MECHANICAL PLANS.

FURNISH AND INSTALL FIXED STAPLE PADLOCK HASP, 1 1/16" H x 1 1/16" W x 3 1/2" L, GALVANIZED.

FURNISH AND INSTALL HARDWARE AS FOLLOWS (BUTTS MUST MATCH EXISTING).

TYPE	NUMBER	MANUFACTURER	MODEL	FINISH	FUNCTION
BUTTS	4 PAIR (8)	HAGER	1191	US32D (STAINLESS)	
LOCKSET	1	BEST	9K	630 SATIN STAINLESS	STOREROOM
	2	IVES	FB457	626 SATIN CHROME	FLUSH BOLTS
WEATHERSTRIP	1	NGP	160VA	AL	
SWEEP	1	NGP	02VA	AL	

INSTALL NEW HOLLOW METAL DOORS TO MATCH EXISTING FRAME DIMENSIONS (FIELD VERIFY).

DOORS SHALL BE FABRICATED FROM NOT LESS THAN 18 GA. COLD ROLLED STEEL SHEET WITH FACE SKINS LAMINATED TO A FOAM CORE SLAB OF EXPANDED POLYSTYRENE OF NOT LESS THAN 1 LB/CF DENSITY.

DOORS SHALL BE DELIVERED FACTORY FINISHED IN A COLOR TO BE APPROVED BY ARCHITECT.

DOORS SHALL BE FURNISHED PRE-CUT FOR LOUVER KITS AS SPECIFIED ON MECHANICAL PLANS.

FURNISH AND INSTALL HARDWARE AS FOLLOWS (BUTTS MUST MATCH EXISTING).

TYPE	NUMBER	MANUFACTURER	MODEL	FINISH	FUNCTION
BUTTS	2 PAIR (4)	HAGER	1191	US32D (STAINLESS)	
LOCKSET	1	BEST	9K	630 SATIN STAINLESS	STOREROOM
WEATHERSTRIP	1	NGP	160VA	AL	
SWEEP	1	NGP	02VA	AL	

1 / A-1-11 PROPOSED

SCALE: 1/4" = 1'-0'

REGISTERED ARCHITECT — LAUREN HARROD — 18345 — STATE OF TEXAS — 29 JAN 21

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TBPLS FIRM REGISTRATION NO.: 10065600

NONO.

NO.	DATE	DESCRIPTION	BY

0 — 1"

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KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

4108 TODD LANE
AUSTIN, TEXAS 78744

PLOTTED: 1/29/2021
JOB NO: 023-92B

A-1-11

ELECTRICAL ABBREVIATIONS

AMPERE	A(AMP)
ABOVE	ABV
ABOVE FINISHED FLOOR	AFF
ABOVE FINISHED GRADE	AFG
AIR CONDITIONING	A/C
ALUMINUM	AL
APPROXIMATE(LY)	APPROX.
ARCHITECT(URAL)	ARCH('L).
AUTHORITY HAVING JURISDICTION	AHJ
BELOW	BLW
BREAKER	BKR
BUILDING	BLDG.
CARD READER	CR
CEILING	CLG
CIRCUIT	CKT
CONCRETE MASONRY UNIT	CMU
CONDENSATE DRAIN	COND.
COPPER	CU
CONDUIT	C.
COUNTER	CTR
CURRENT TRANSFORMER	CT
DEMOLISH(ITION)	DEMO.
DEPARTMENT	DEPT.
DETAIL	DET.
DISCONNECT	DISC.
DIVISION	DIV.
DRAWING(S)	DWG(S)
EACH	EA.
ELECTRICAL CONTRACTOR	EC
ELECTRIC(AL)	ELEC.
ELECTRIC WATER COOLER	EWC
ELEVATOR	ELEV.
EMERGENCY	EM,EMER
ENGINEER	ENGR.
EQUIPMENT	EQPT.
ETCETERA	ETC.
EXHAUST FAN	EF
EXISTING	EXIST.,(E)
EXISTING RELOCATED	ER
EXISTING TO REMAIN	ETR
FIRE ALARM	F/A
FIRE ALARM CONTROL PANEL	FACP
FIRE ALARM ANNUNCIATOR PANEL	FAAP
FIRE / SMOKE DAMPER	F/S
FOOT/FEET	FT.
GALVANIZED	GALV.
GENERAL CONTRACTOR	GC
GROUND	GND,G
GROUNDING ELEC. CONDCTOR	GEC
GROUND FAULT CIRCUIT INTERRUPTER	GFCI,GF
HEATING, VENTILATION & AIR CONDITIONING	HVAC
INFORMATION	INFO
INTERIOR	INT.
ISOLATED GROUND	IG
JUNCTION BOX	JB,(J-BOX)
KILOAMPERE INTERRUPTING CAPACITY	kAIC
KILOVOLT-AMPS	kVA
LIGHTING CONTACTOR	LC
LIGHTING CONTROL PANEL	LCP
MAIN CIRCUIT BREAKER	MCB
MAIN LUG ONLY	MLO
MANUFACTURE(R)	MFR.
MAXIMUM	MAX
MAXIMUM OVERCURRENT PROTECTION	MOCP
MECHANICAL	MECH.
MINIMUM	MIN.
MINIMUM CURRENT AMPACITY	MCA
MISCELLANEOUS	MISC.
MOUNTING HEIGHT TO CENTER LINE OF DEVICE AFF OR AFG	+(#)"
NATIONAL ELECTRICAL CODE	NEC
NEMA 1, NEMA 3R, NEMA RATING (AS NOTED)	N1,N3R,N_
NIGHT LIGHT	NL
NOMINAL	NOM.
NOT APPLICABLE	N/A
NOT IN CONTRACT	N.I.C.
NOT TO SCALE	N.T.S.
NUMBER	NO.,#
PANEL	PNL
PARTIAL	PART.
PHASE	PH.,Ø
PHOTOCELL	PC
POLE	P
POLYVINYL CHLORIDE	PVC
POWER POLE	PP
QUANTITY	QTY
RECEPTACLE	RECEPT.
REFER TO / REFERENCE	REF.
REQUIRE(D)	REQ.('D)
RIGID GALVANIZED STEEL	RGS
ROOM	RM
SERVICE DISTRIBUTION ENCLOSURE	SDE
SPECIFICATION(S)	SPEC.(S)
SQUARE	SQ.
SQUARE FEET	SF
STRUCTURED MEDIA CENTER	SMC
SURGE PROTECTIVE DEVICE	SPD
SWITCH	SW.
TELEPHONE / DATA COMBO	TELEDATA
TELEPHONE	TEL.
TELEPHONE MOUNTING BOARD	TMB
TELEVISION	TV
TEXAS	TX
THROUGH	THRU
TIMECLOCK	TC
TRANSFORMER	XFMR
TYPICAL	TYP
UNDERGROUND	UG
UNDERWRITER LABORATORIES INC.	UL
UNINTERRUPTIBLE POWER SUPPLY	UPS
UNLESS NOTED OTHERWISE	UNO
UTILITY	UTIL.
VOLT-AMPS	VA
VOLTAGE / VOLTS	V
WEATHER PROOF	WP
WEATHER RESISTANT	WR
WITH	W/
WITHOUT	W/O

NOTE: NOT ALL ABBREVIATIONS ON THIS LIST ARE APPLICABLE TO THIS PROJECT.

APPLICABLE CODES
2012 IBC
2020 NEC
2015 IECC
2012 TAS
2015 IFC
LOCAL CODES AND ORDINANCES

VOLTAGE DROP TABLE (20A CIRCUITS ONLY)		
	208V, 1Ø	120V, 1Ø
#12 AWG	0 - 90 FT.	0 - 50 FT.
#10 AWG	91 - 150 FT.	51 - 90 FT.
#8 AWG	151 - 250 FT.	91 - 140 FT.
#6 AWG	251 - 390 FT.	141 - 225 FT.
#4 AWG	391 - 630 FT.	226 - 300 FT.
(VERIFY MINIMUM VOLTAGE DROP AND CONDUIT SIZE, PER N.E.C.)		

ELECTRICAL LEGEND

NOTES: MOUNTING HEIGHTS LISTED BELOW INDICATE HEIGHT TO CENTER OF DEVICE. ALL SYMBOLS SHOWN ON LEGEND ARE NOT NECESSARILY USED.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A	1X4 LINEAR FIXTURE W/ DESIGNATION		PANELBOARD OR LOAD CENTER - SURFACE MOUNT, RECESSED MOUNT
A	2X2 LINEAR FIXTURE W/ DESIGNATION		TRANSFORMER
A	2X4 LINEAR FIXTURE W/ DESIGNATION		DISCONNECT SWITCHES - NON-FUSED, FUSED. FUSE SIZES NOTED ON DRAWINGS WITH "AF".
	EMERGENCY LIGHT FIXTURE (HALF-SHADED FOR ANY FIXTURE)		MAGNETIC MOTOR STARTER
A	LINEAR 6" OR SLOT FIXTURE W/ DESIGNATION		COMBINATION STARTER AND DISCONNECT
A	LINEAR STRIP FIXTURE W/ DESIGNATION		VARIABLE FREQUENCY DRIVE (VFD), COMBINATION VFD AND DISCONNECT
A	RECESSED DOWNLIGHT FIXTURE W/ DESIGNATION		MOTOR
A	SURFACE DOWNLIGHT FIXTURE W/ DESIGNATION		PUSHBUTTON - SINGLE, MUSHROOM HEAD
A	PENDANT FIXTURE W/ DESIGNATION		METER - PLAN VIEW, ONE-LINE DIAGRAM
A	WALL WASH FIXTURE W/ DESIGNATION, DIRECTION INDICATED BY TRIANGLE		METER BANK
A	WALL MOUNT LINEAR FLUORESCENT FIXTURE W/ DESIGNATION		UNISTRUT RACK
A	WALL MOUNT FIXTURE W/ DESIGNATION		LIGHTING CONTROLS
	SPOTLIGHT	(O) (V)	OCCUPANCY SENSOR, VACANCY SENSOR - CEILING MOUNTED
	CEILING W/ FACE INDICATED; WALL W/ FACE, EMERGENCY HEADS, AND DIRECTIONAL ARROWS (INSTALL FACES AND ARROWS AS INDICATED)	(O)H (V)H	OCCUPANCY SENSOR, VACANCY SENSOR - MOUNTED HIGH ON WALL
	EMERGENCY BATTERY FIXTURE	PC	PHOTOELECTRIC CELL
	CEILING FAN	LC	LIGHTING CONTACTOR
	POLE LIGHT (ARM MOUNT, POST-TOP MOUNT)	TC	TIMECLOCK
	BOLLARD FIXTURE	LCP	LIGHTING CONTROL PANEL
	SINGLE 20A RECEPTACLE AT 18" UNLESS NOTED	DZ	DAYLIGHT ZONE SENSOR
	20A DUPLEX RECEPTACLE AT 18" UNLESS NOTED	$	LIGHT SWITCH AT 48" UNLESS NOTED
	20A GFI DUPLEX RECEPTACLE AT 18" UNLESS NOTED	D	DIMMER SWITCH AT 48" UNLESS NOTED
	DOUBLE 20A DUPLEX RECEPTACLE AT 18" UNLESS NOTED	$	LOW-VOLTAGE SMART LIGHT SWITCH AT 48" UNLESS NOTED
	20A DUPLEX RECEPTACLE 6" ABOVE COUNTER UNLESS NOTED		SUBSCRIPTS
	20A DUPLEX RECEPTACLE SPECIAL MOUNT (FLOOR, CEILING)	3	3-WAY SWITCH
IG	20A ISOLATED GROUND RECEPTACLE	4	4-WAY SWITCH
WP	20A RECEPTACLE WITH WEATHERPROOF "EXTRA DUTY" COVER AND WEATHER-RESISTANT GFCI RECEPTACLE	F	SINGLE POLE CEILING FAN & LIGHT SWITCH WITH 3-SPEED FAN CONTROL TO ALLOW CONTROL OF FAN INDEPENDENT OF LIGHT KIT
	COMBINATION DUAL USB WITH DUPLEX RECEPTACLE	K	KEY-OPERATED SWITCH
30	SPECIAL RECEPTACLE (RATING NOTED)	M	MOTOR-RATED SWITCH
	COMBINATION TELEPHONE/DATA (TELE-DATA) OUTLET (18" ON WALL, 6" ABOVE COUNTER)	O	OCCUPANCY SENSOR SWITCH
	COMBINATION TELEPHONE/DATA (TELE-DATA) OUTLET SPECIAL MOUNT (FLOOR, CLG)	P	SWITCH WITH PILOT LIGHT
	TELEPHONE OUTLET, DATA OUTLET	R	RED EMERGENCY BRANCH SWITCH
	TELEVISION CABLE CONNECTION AT 58" A.F.F. UNLESS OTHERWISE NOTED.	T	TIMER SWITCH
FOB	LOW-VOLTAGE OR DATA OUTLET INTENDED FOR SPECIFIC PURPOSE (CARD READER, FOB SECURITY DEVICE SHOWN)	V	VACANCY SENSOR SWITCH (AUTO OFF, MANUAL ON)
	J-BOX (CEILING/WALL, FLOOR)	a	LOWER CASE LETTER AT FIXTURES AND SWITCHES (a, b, ETC.) INDICATES SWITCHING CONTROL.
	SECURITY CAMERA		FIRE ALARM SYSTEM
	SPEAKER - CEILING MOUNTED, WALL MOUNTED	FACP	FIRE ALARM CONTROL PANEL
W	WIFI OUTLET - CEILING MOUNTED	FAAP	FIRE ALARM ANNUNCIATOR PANEL
	CONDUIT RUN EXPOSED OR CONCEALED	F	MANUAL PULL STATION DOUBLE ACTION
	CONDUIT RUN BELOW FLOOR OR GRADE		GENERAL ALARM COMBINATION HORN/STROBE (AUDIO/VISUAL) (WALL, CLG)
	ITEM TO BE REMOVED		FIRE ALARM STROBE (VISUAL DEVICE) (WALL, CLG)
	SWITCHLEG		SMOKE/IONIZATION DETECTOR
	CIRCUIT HOMERUN, #12, THWN/THHN & QTY AS REQ'D, W/ GND, 3/4"C., UNLESS NOTED		HEAT DETECTOR
	CIRCUIT HOMERUN CONTAINING 3 HOTS, NEUTRAL, GROUND, AND ISOLATED GROUND		DUCT DETECTOR
	CONDUIT STUB-UP - CAP & MARK	CO	COMBINATION SMOKE / CARBON MONOXIDE DETECTOR
	CONDUIT OR CIRCUIT BREAK/CONTINUATION (DIAGRAMMATIC ONLY)	B	BEAM DETECTOR
	GROUND	FS	SPRINKLER SYSTEM FLOW SWITCH
		TS	SPRINKLER SYSTEM TAMPER SWITCH
			ELECTRIC DOOR HOLDER

ELECTRICAL GENERAL NOTES

1. THESE DRAWING NOTES ACCOMPANY THE PUBLISHED CONSTRUCTION DOCUMENT SPECIFICATION BOOK (PROJECT MANUAL).
2. EXISTENCE AND LOCATION OF DEVICES, FIXTURES, EQUIPMENT, CIRCUITING, ETC. THAT ARE SHOWN TO BE EXISTING WAS TAKEN FROM EXISTING DRAWINGS AND/OR VISUAL INSPECTION AND SHOULD BE VERIFIED IN FIELD PRIOR TO ANY PRICING OR WORK.
3. ELECTRICAL CONTRACTOR SHALL VISIT SITE AND SHALL BECOME FAMILIAR WITH SITE CONDITIONS AND VERIFY DIMENSIONS AND WORK TO BE INSTALLED PRIOR TO SUBMITTING A BID: BY SUBMITTING A BID, CONTRACTOR CERTIFIES FAMILIARITY WITH EXISTING JOBSITE CONDITIONS PRIOR TO COMMENCEMENT OF WORK; FAILURE TO DO SO WILL NOT BE CAUSE FOR EXTRA WORK COMPENSATION.
4. ALL MATERIAL SHALL BE NEW AND SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY.
5. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR AT LEAST 75°C. (CU/AL) OR AS NOTED IN MANUFACTURER'S INSTRUCTIONS, WHICHEVER IS GREATER.
6. FURNISH ALL MATERIAL, LABOR, EQUIPMENT AND PERMITS TO PROVIDE A COMPLETE, OPERATIONAL ELECTRICAL SYSTEM CONSISTENT WITH THE INTENT OF THE DRAWINGS. WHERE THE WORD "PROVIDE" IS USED, IT SHALL MEAN, "FURNISH AND INSTALL COMPLETE AND READY FOR USE".
7. INSTALLATIONS FOUND NOT COMPLYING WITH SPECIFIED WORKMANSHIP PRACTICES SHALL BE REVISED TO COMPLY AT NO ADDITIONAL COST TO THE OWNER.
8. ELECTRICAL CONTRACTOR SHALL PERFORM WORK IN A SAFE MANNER AND MAINTAIN ADEQUATE PROTECTION OF WORK, THE OWNER'S PROPERTY AND ALL PERSONS ON SITE FROM INJURY, DAMAGE OR LOSS.
9. FIELD-COORDINATE LOCATION OF PANELS, CONDUITS AND DEVICES WITH STRUCTURAL MEMBERS AND EQUIPMENT FROM OTHER TRADES. CAREFULLY COORDINATE INSTALLATION SCHEDULES WITH OTHER TRADES AND GENERAL CONTRACTOR. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN. COORDINATE LOCATION AND INSTALLATION OF OWNER-FURNISHED ITEMS AFFECTING THIS TRADE.
10. ALL WIRING SHALL BE IN CONDUIT. MC-TYPE CABLE MAY BE USED FOR INTERIOR BRANCH CIRCUIT WIRING IF ALLOWED BY THE AUTHORITY HAVING JURISDICTION. ALL WIRING SHALL BE #12 AWG MINIMUM COPPER CONDUCTORS. ALUMINUM CONDUCTORS WILL NOT BE ALLOWED.
11. FEEDER CONDUCTORS, BRANCH WIRING, PANEL BUSS AND GROUND BUSS SHALL BE COPPER, UNLESS NOTED OTHERWISE.
12. ELECTRICAL DISTRIBUTION EQUIPMENT SHALL BE GENERAL ELECTRIC, EATON, SQUARE D OR SIEMENS.
13. ELECTRICAL CONTRACTOR SHALL ASSIGN CIRCUITS IN FIELD ON ALL PANELBOARDS TO MAKE LOADS ON EACH PHASE AS BALANCED AS POSSIBLE.
14. ELECTRICAL CONTRACTOR SHALL ASSEMBLE AND PROVIDE TO THE OWNER AS PART OF CLOSE-OUT SUBMISSION REQUIREMENTS, ORGANIZED BINDER WITH TECHNICAL DATA, CUT SHEETS, MAINTENANCE REQUIREMENTS, ADJUSTMENT PROCEDURES, TEST REPORTS, APPROVALS, WARRANTIES, PHONE NUMBERS OF SERVICE PERSONNEL, SOURCES OF REPLACEMENT PARTS AND OTHER PERTINENT INFORMATION.
15. BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.
16. COORDINATE EACH AND EVERY INTERRUPTION OF SERVICES AND UTILITIES WITH THE OWNER AND UTILITY COMPANIES TO ENSURE MINIMUM SHUT-DOWN TIMES ARE ACCEPTABLE.
17. FOR EACH EQUIPMENT CONNECTION SHOWN, PROVIDE THE DEVICE, OUTLET, DISCONNECT SWITCH, OR JUNCTION BOX REQUIRED TO CONNECT THE EQUIPMENT.
18. NO SINGLE CONDUIT SHALL CONTAIN MORE THAN 6 CURRENT CARRYING CONDUCTORS, UNLESS NOTED OTHERWISE AND PROPERLY DERATED.
19. REVIEW ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, PLUMBING, AND OTHER DRAWINGS PRIOR TO BID.
20. INSTALL ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DEVIATIONS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION PRIOR TO INSTALLATION.
21. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING, AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC. REQUIRED. BACKFILL TRENCHES TO 90% COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.
22. SEE PLUMBING AND MECHANICAL DRAWINGS FOR ALL DIVISION 22 AND 23 EQUIPMENT LOCATIONS AND ELECTRICAL LOAD REQUIREMENTS.
23. ELECTRICAL CONTRACTOR TO PROVIDE MEANS (REQUEST AND INSTALLATION OF) TEMPORARY CONSTRUCTION POWER.

REV NO.	BY	DATE	REVISION DESCRIPTION
		11/27/2020	ISSUE FOR PERMIT
		12/04/2020	ISSUED FOR CONSTRUCTION

ENCOTECH
ENGINEERING CONSULTANTS
TBPE Firm 1141
8500 Bluffstone Cove, Suite B-103
Austin, Texas 78759 | 512.338.1101
Project No.: 20049.MS.AUS

CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

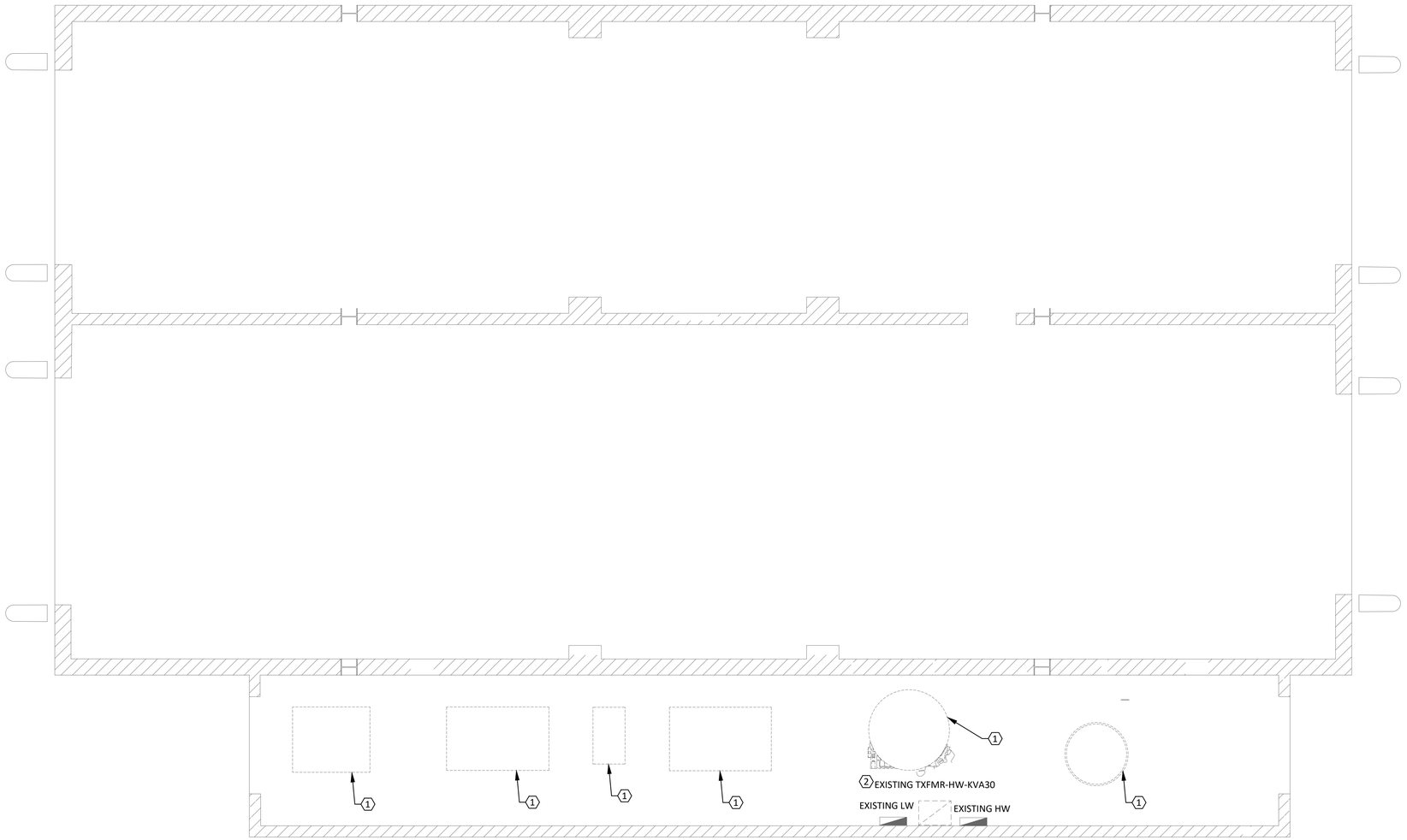
ELECTRICAL GENERAL NOTES

CITY OF AUSTIN FOUNDED 1839

NOTES	NAME	DATE
SURVEY BY		
DRAWN BY		
DESIGNED BY		
CHECKED BY		
REVIEWED BY		

STATE OF TEXAS
SHARON S. BICKFORD
77390
LICENSED PROFESSIONAL ENGINEER
12/04/2020

E-0-00



1 ELECTRICAL - DEMOLITION - LEVEL 1

SCALE: 1/4"=1'-0"

KEYED NOTES

1. DISCONNECT AND REMOVE EXISTING TRUCK WASH EQUIPMENT FROM ELECTRICAL SYSTEM IN WHOLE ROOM. REMOVE CONDUIT AND CONDUCTORS BACK TO PANELS.
2. DISCONNECT AND REMOVE EXISTING TRANSFORMER TXFMR-HW-KVA30.

DEMOLITION NOTES

A. REFER TO GENERAL NOTES ON SHEET E-0-00 FOR ADDITIONAL INFORMATION.

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		11/27/2020	ISSUE FOR PERMIT
		12/04/2020	ISSUED FOR CONSTRUCTION

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CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

ELECTRICAL - DEMOLITION - LEVEL 1

NOTES	NAME	DATE
SURVEY BY		
DRAWN BY		
DESIGNED BY		
CHECKED BY		
REVIEWED BY		

STATE OF TEXAS
SHARON S. BICKFORD
77390
LICENSED
PROFESSIONAL ENGINEER
12/04/2020

E-1-01

KEYED NOTES

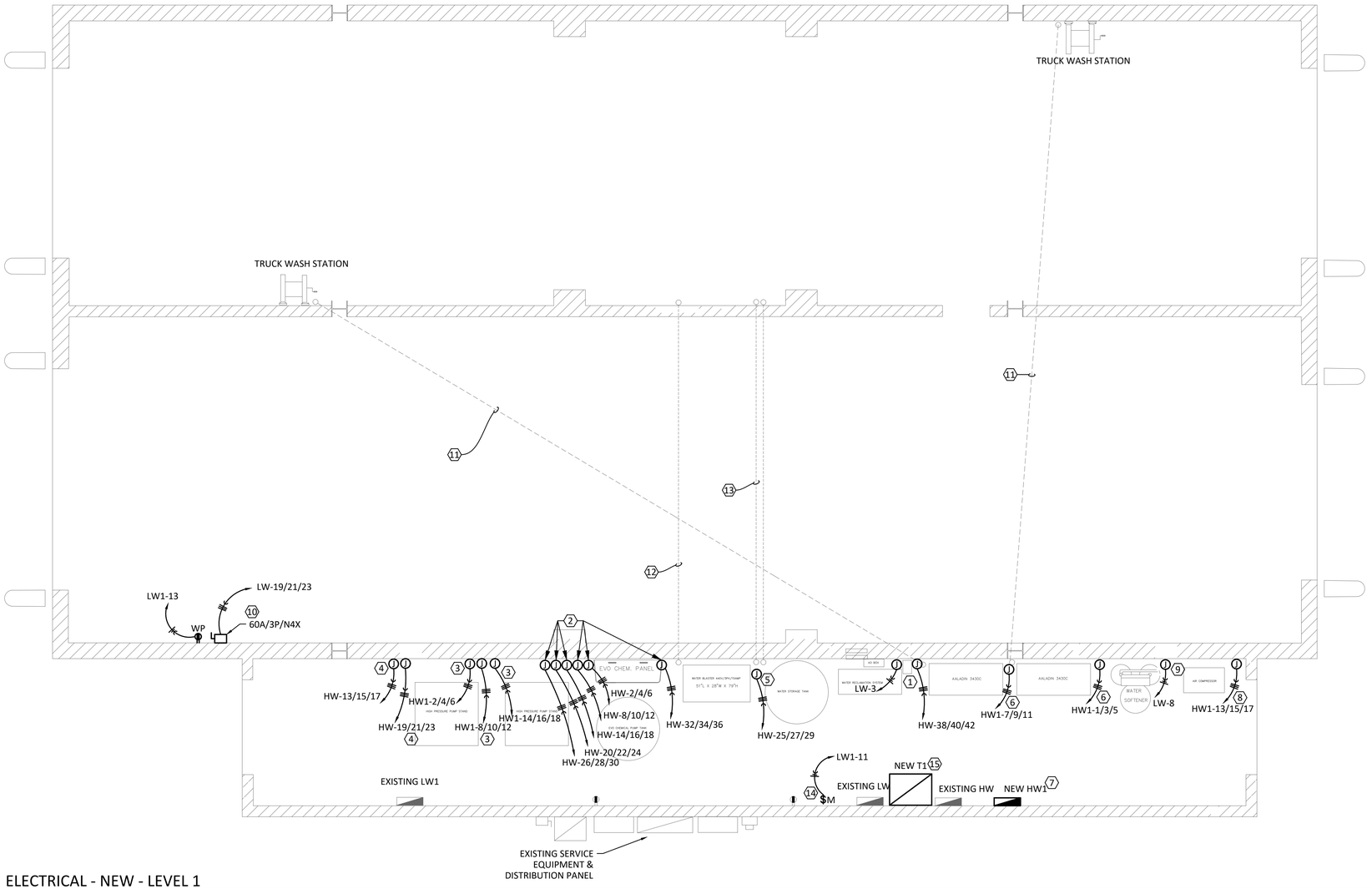
1. PROVIDE JUNCTION BOX AND VFD FOR PURWATER 300-5M240 WATER RECLAMATION UNIT. PROVIDE JUNCTION BOX FOR CONTROL CIRCUIT.
2. PROVIDE JUNCTION BOX FOR CHEMICAL PUMP.
3. PROVIDE JUNCTION BOX FOR RC065056 HIGH PRESSURE PUMP STAND.
4. PROVIDE JUNCTION BOX FOR RC065056 HIGH PRESSURE PUMP STAND.
5. PROVIDE JUNCTION BOX FOR WATERMAZE WATER BLASTER.
6. PROVIDE JUNCTION BOX FOR AALADIN 3430C PRESSURE WASHER.
7. PROVIDE NEW 480/277V, 3PH, 100A PANEL HW1. REFER TO PANEL SCHEDULE ON SHEET E-6-01 FOR MORE INFORMATION.
8. PROVIDE JUNCTION BOX FOR ROLAIR AIR COMPRESSOR.
9. PROVIDE JUNCTION BOX FOR WATER SOFTENER.
10. PROVIDE 60A/3P/N4X DISCONNECT SWITCH FOR PROGRESS TROLLEY.
11. ROUTE 1/2" CONDUIT FROM AALADIN 3430C PRESSURE WASHER TO WASHING STATION.
12. ROUTE 1/2" CONDUIT AS SHOWN.
13. ROUTE 3" CONDUIT AS SHOWN.
14. PROVIDE MOTOR RATED SWITCH IN NEMA 4X ENCLOSURE FOR NEW EXHAUST FAN. FAN SHALL OPERATE CONTINUOUSLY.
15. PROVIDE NEW FLOOR MOUNT 480/277V-208/120V, 3PH, 75KVA TRANSFORMER. CONNECT TO EXISTING PANELS HW AND LW. REFER TO ONE LINE DIAGRAM AND PANEL SCHEDULES FOR MORE INFORMATION.

NOTES

A. REFER TO GENERAL NOTES ON SHEET E-0-00 FOR ADDITIONAL INFORMATION.

B. CIRCUIT BREAKER SHALL SERVE AS DISCONNECTING MEANS FOR EQUIPMENT WITHIN 50 FT AND IN SIGHT OF PANELBOARD.

C. CONDUIT TO FAR BAY SHALL BE ROUTED THROUGH WALL AND OVER ROOF SO AS TO NOT OBSTRUCT WASH EQUIPMENT. PROVIDE CONDUIT WITH PULL STRINGS FOR INSTALLATION OF CONTROL WIRES BY OTHERS UNLESS NOTED OTHERWISE.



1 ELECTRICAL - NEW - LEVEL 1

SCALE: 1/4"=1'-0"

REV NO.	BY	DATE	REVISION DESCRIPTION
		11/27/2020	ISSUE FOR PERMIT
		01/29/2021	ISSUED FOR CONSTRUCTION

ENGCOTECH
ENGINEERING CONSULTANTS
TBPE Firm 1141
8500 Bluffstone Cove, Suite B-103
Austin, Texas 78759 | 512.338.1101
Project No.: 20049.MS.AUS

CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

ELECTRICAL - NEW - LEVEL 1

CITY OF AUSTIN
FOUNDED 1839

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STATE OF TEXAS
SHARON S. BICKFORD
77390
LICENSED
PROFESSIONAL ENGINEER
01/29/2021

E-1-02

DESIGNATION RANGE (ID)	GROUNDING ELECTRODE CONDUCTOR CU WIRE SIZE FOR:		
	GROUND ROD	CONCRETE-ENCASED ELECTRODE	STRUCTURAL STEEL AND METAL WATER PIPING (IF ANY)
20G-100G	#8	#8	#8
125G-150G	#6	#6	#6
175G-200G	#6	#4	#4
225G-300G	#6	#4	#2
350G-500G	#6	#4	#1/0
600G-800G	#6	#4	#2/0
1000G+	#6	#4	#3/0
NOTES:	1. DESIGNATIONS REFER TO AMPERAGE FOLLOWED BY A "G." FOR EXAMPLE, 30G WOULD FALL WITHIN THE 20G-100G RANGE.		
	2. CONDUCTOR CONNECTED TO FIRST ELECTRODE IN SYSTEM SHALL BE SIZED ACCORDING TO THE GROUNDING ELECTRODE REQUIRING THE LARGEST CONDUCTOR. ONLY AVAILABLE GROUNDING ELECTRODES IN SYSTEM SHALL BE CONSIDERED. ALL BONDING BETWEEN REMAINING ELECTRODES SHALL BE SIZED ACCORDING TO VALUE LISTED IN TABLE.		
	3. GROUNDING ELECTRODE SYSTEMS SHALL CONSIST OF ALL AVAILABLE GROUNDING ELECTRODES.		
	4. THIS TABLE IS BASED ON ARTICLE 250.66 OF THE NEC.		

FEEDER AND BRANCH CIRCUIT SCHEDULE

MARK	# OF SETS	PHASE & NEU. CONDUCTORS (CU)	EQUIP. GRND CONDUCTOR (CU)	3PH / 4W CONDUIT SIZE	1 OR 3PH / 3W CONDUIT SIZE	1PH / 2W CONDUIT SIZE
20	1	#12	#12	3/4"	3/4"	3/4"
25	1	#10	#10	3/4"	3/4"	3/4"
30	1	#10	#10	3/4"	3/4"	3/4"
35	1	#8	#10	3/4"	3/4"	3/4"
40	1	#8	#10	1"	3/4"	3/4"
45	1	#8	#10	1"	3/4"	3/4"
50	1	#8	#10	1"	1"	3/4"
55	1	#6	#10	1-1/2"	1-1/2"	1"
60	1	#6	#10	1-1/2"	1-1/2"	1"
70	1	#4	#8	1-1/2"	1-1/2"	1"
80	1	#4	#8	1-1/2"	1-1/2"	1"
90	1	#3	#8	1-1/2"	1-1/2"	1"
100	1	#3	#8	2"	1-1/2"	1-1/2"
125	1	#1	#6	1-1/2"	1-1/2"	N/A
150	1	#1/0	#6	2"	1-1/2"	N/A
175	1	#2/0	#6	2"	2"	N/A
200	1	#3/0	#6	2-1/2"	2"	N/A
225	1	#4/0	#4	2-1/2"	2"	N/A
250	1	250 KCMIL	#4	3"	2-1/2"	N/A
300	1	350 KCMIL	#4	3"	3"	N/A
350	2	#2/0	#3	2"	2"	N/A
400	2	#3/0	#3	2-1/2"	2"	N/A
500	2	250 KCMIL	#2	3"	2-1/2"	N/A
600	2	350 KCMIL	#1	3"	3"	N/A
800	3	300 KCMIL	#1/0	2-1/2"	2-1/2"	N/A
1000	3	400 KCMIL	#2/0	4"	3"	N/A
1200	4	350 KCMIL	#3/0	3"	3"	N/A
1600	5	400 KCMIL	#4/0	4"	4"	N/A
2000	6	400 KCMIL	250 KCMIL	4"	N/A	N/A
2500	7	500 KCMIL	400 KCMIL	4"	N/A	N/A
3000	8	500 KCMIL	400 KCMIL	4"	N/A	N/A
3500	10	500 KCMIL	500 KCMIL	4"	N/A	N/A
4000	10	600 KCMIL	500 KCMIL	4"	N/A	N/A

NOTES:

A. FEEDER AND BRANCH CIRCUIT SCHEDULE IS BASED ON NEC TABLE 310.15(B)(16) AND TABLE 250.122.

B. ALL NEUTRAL CONDUCTORS SHALL MATCH THE SIZE OF THE PHASE CONDUCTORS UNLESS OTHERWISE NOTED.

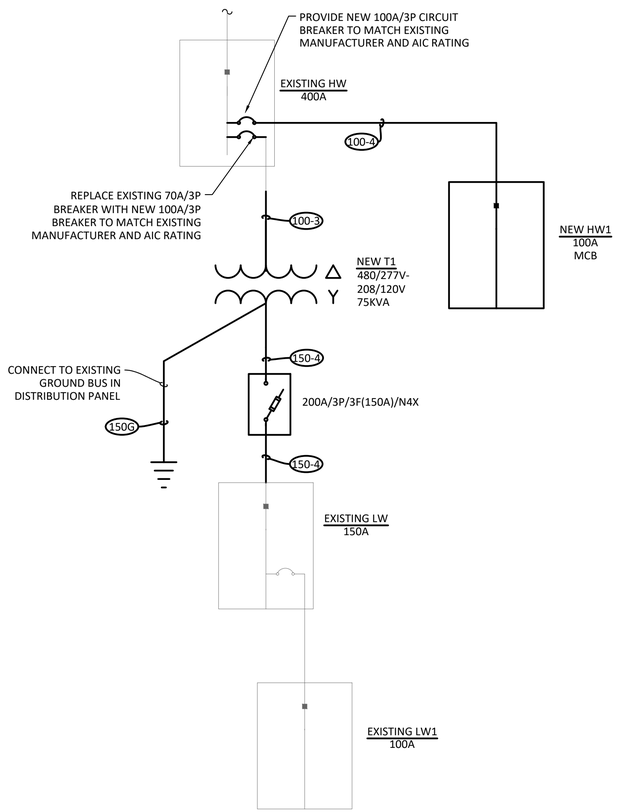
C. FEEDER AND BRANCH CIRCUIT SCHEDULE IS NOT TO BE USED FOR SIZING SERVICE FEEDERS BEFORE MAIN OVERCURRENT PROTECTION EQUIPMENT.

D. FEEDER AND BRANCH CIRCUIT MARK LEGEND

100 - 4 (NG, IF SHOWN = NO GND)

CIRCUIT MARK
SEE FEEDER AND BRANCH CIRCUIT SCHEDULE FOR CONDUCTOR AND CONDUIT SIZE

NUMBER OF PHASE CONDUCTORS
4 = 3 PH / 4 WIRE
3 = 1 OR 3 PH / 3 WIRE
2 = 1 PH / 2 WIRE



1 ELECTRICAL ONE LINE DIAGRAM
N.T.S.

REV NO.	BY	DATE	REVISION DESCRIPTION
		11/27/2020	ISSUE FOR PERMIT
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CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

ELECTRICAL ONE LINE DIAGRAM

CITY OF AUSTIN FOUNDED 1839

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STATE OF TEXAS
SHARON S. BICKFORD
77390
LICENSED
PROFESSIONAL ENGINEER
12/04/2020

E-5-01

PANELBOARD SCHEDULE — EXISTING — HW

LOCATION: EQUIPMENT ROOM
C.B. RATING: 35 K.A.I.C.

WIRE SIZE	TYPE	VOLTAGE	PHASE	WIRE	MOUNTING	BUS (A)	LUG	TYPE	TYPE	WIRE SIZE
		480Y/277V	3	4	SURFACE	400	MLO	NEMA 4X		
		USE and/or AREA SERVED	C/B POLE	CIR	LOAD ØA / ØB / ØC	CIR	C/B POLE	USE and/or AREA SERVED		
		WASH BAY, MECH RM LIGHTING	20/1	1	1500 / 1142	2	20/3	CHEM PUMP, 1HP		
		WASH BAY LIGHTING	20/1	3	1000 / 1142	4				
		EXTERIOR LIGHTING	20/1	5	500 / 1142	6				
		XFMR TLW	100/3	7	9398 / 1142	8	20/3	CHEM PUMP, 1HP		
				9	11498 / 1142	10				
				11	9014 / 1142	12				
		PUMP STAND	20/3	13	4352 / 870	14	20/3	CHEM PUMP, 3/4HP		
				15	4352 / 870	16				
				17	4352 / 870	18				
		PUMP STAND	20/3	19	4352 / 5984	20	30/3	HP3 PUMP, 7.5HP		30-3
				21	4352 / 5984	22				
				23	4352 / 5984	24				
		WATER BLASTER	20/3	25	3808 / 5984	26	30/3	HP3 PUMP, 7.5HP		30-3
				27	3808 / 5984	28				
				29	3808 / 5984	30				
100-4		PANEL HW1	100/3	31	20889 / 5984	32	30/3	HP3 PUMP, 7.5HP		30-3
				33	20889 / 5984	34				
				35	20889 / 5984	36				
		SPACE		37	- / 4134	38	20/3	WTR RECLAIM		
				39	- / 4134	40				
				41	- / 4134	42				
TOTAL LOAD PER PHASE					69539	71139	68155	71139 VA / 277 V = 257 A		

① GFCI ② AFCI ③ AFCI/GFCI ④ SHUNT TRIP ⑤ SWD ⑥ HACR ⑦ LOCKABLE

OPTIONS: NONE - REFER TO SPECIFICATIONS

FEEDER OCPD AND CONDUCTOR CALCULATION

LOAD DESCRIPTION (LOAD IN KVA)	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	LOAD MULTIPLIER	FEEDER LOAD	NOTES
LIGHTING	3.00	1.00	3.00	1.25	3.75	
RECEPTACLES	1.08	50%>10	1.08	1.00	1.08	
LARGEST MOTOR	17.95	1.00	17.95	1.25	22.44	
OTHER MOTOR(S)	184.70	1.00	184.70	1.00	184.70	
HEATING	1.58	1.00	1.58	1.25	1.98	
CONTINUOUS LOADS	0.02	1.00	0.02	1.25	0.03	
NONCONTINUOUS LOADS	0.50	1.00	0.50	1.00	0.50	
KITCHEN EQUIPMENT QTY = 0	0.00	1.00	0.00	1.00	0.00	
DIVERSIFIED LOAD	0.00	1.00	0.00	0.50	0.00	
TOTAL KVA	**208.83**	-	-	-	**214.47**	
TOTAL AMPS	**251 A**	-	-	-	**258 A**	

PANELBOARD SCHEDULE — EXISTING — LW

LOCATION: EQUIPMENT ROOM
C.B. RATING: 22 K.A.I.C.

WIRE SIZE	TYPE	VOLTAGE	PHASE	WIRE	MOUNTING	BUS (A)	LUG	TYPE	TYPE	WIRE SIZE
		208Y/120V	3	4	SURFACE	150	MLO	NEMA 4X		
		USE and/or AREA SERVED	C/B POLE	CIR	LOAD ØA / ØB / ØC	CIR	C/B POLE	USE and/or AREA SERVED		
		EXT RECEPTACLE	20/1	1	180 / 540	2	20/1	RCPT		
		WTR RECLAIM CNTL	20/1	3	- / 500	4	20/1	SPARE		
		SPARE	20/1	5	- / -	6	20/1	SPARE		
		MECH ROOM RCPT	20/1	7	180 / 20	8	20/1	WATER SOFTENER		
		MECH ROOM RCPT & HEATER	20/1	9	- / 380	10	20/1	SPARE		
		SPARE	20/1	11	- / -	12	20/1	SPARE		
		MECH ROOM GFI	20/1	13	180 / -	14	20/1	SPARE		
		SPARE	20/1	15	- / -	16	20/1	SPARE		
		HEATER	20/1	17	- / 200	18	20/1	SPARE		
45-3		TROLLEY	45/3	19	3993 / -	20	20/1	SPARE		
				21	- / 3993	22	20/1	SPARE		
				23	- / 3993	24	20/1	SPARE		
		AO BOX	35/3	25	4125 / -	26	20/1	SPARE		
				27	- / 4125	28	20/1	SPARE		
				29	- / 4125	30	20/1	SPARE		
		SPARE	20/1	31	- / -	32	20/1	SPARE		
		SPARE	20/1	33	- / -	34	20/1	HEAT TRACE		
		SPARE	20/1	35	- / 1000	36	20/1	SPARE		
		SPARE	20/1	37	- / -	38	100/3	PANEL LW1		
		SPARE	20/1	39	180 / -	40				
		SPARE	20/1	41	- / 1500	42				
TOTAL LOAD PER PHASE					9398	11498	9014	11498 VA / 120 V = 96 A		

① GFCI ② AFCI ③ AFCI/GFCI ④ SHUNT TRIP ⑤ SWD ⑥ HACR ⑦ LOCKABLE

OPTIONS: NONE - REFER TO SPECIFICATIONS

FEEDER OCPD AND CONDUCTOR CALCULATION

LOAD DESCRIPTION (LOAD IN KVA)	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	LOAD MULTIPLIER	FEEDER LOAD	NOTES
LIGHTING	0.00	1.00	0.00	1.25	0.00	
RECEPTACLES	1.08	50%>10	1.08	1.00	1.08	
LARGEST MOTOR	12.38	1.00	12.38	1.25	15.47	
OTHER MOTOR(S)	14.36	1.00	14.36	1.00	14.36	
HEATING	1.58	1.00	1.58	1.25	1.98	
CONTINUOUS LOADS	0.02	1.00	0.02	1.25	0.03	
NONCONTINUOUS LOADS	0.50	1.00	0.50	1.00	0.50	
KITCHEN EQUIPMENT QTY = 0	0.00	1.00	0.00	1.00	0.00	
DIVERSIFIED LOAD	0.00	1.00	0.00	0.50	0.00	
TOTAL KVA	**29.91**	-	-	-	**33.40**	
TOTAL AMPS	**83 A**	-	-	-	**93 A**	

PANELBOARD SCHEDULE — HW1

LOCATION: EQUIPMENT ROOM
C.B. RATING: 35 K.A.I.C.

WIRE SIZE	TYPE	VOLTAGE	PHASE	WIRE	MOUNTING	BUS (A)	LUG	TYPE	TYPE	WIRE SIZE
		480Y/277V	3	4	SURFACE	100	MLO	NEMA 4X		
		USE and/or AREA SERVED	C/B POLE	CIR	LOAD ØA / ØB / ØC	CIR	C/B POLE	USE and/or AREA SERVED		
		3430C PRESSURE WASHER	20/3	1	3264 / 4352	2	20/3	PUMP STAND		
				3	3264 / 4352	4				
				5	3264 / 4352	6				
		3430C PRESSURE WASHER	20/3	7	3264 / 4352	8	20/3	PUMP STAND		
				9	3264 / 4352	10				
				11	3264 / 4352	12				
		ROLAIR AIR COMPRESSOR	20/3	13	1305 / 4352	14	20/3	PUMP STAND		
				15	1305 / 4352	16				
				17	1305 / 4352	18				
		SPACE		19	- / -	20		SPACE		
				21	- / -	22				
				23	- / -	24				
				25	- / -	26				
				27	- / -	28				
				29	- / -	30				
				31	- / -	32				
				33	- / -	34				
				35	- / -	36				
				37	- / -	38				
				39	- / -	40				
				41	- / -	42				
TOTAL LOAD PER PHASE					20889	20889	20889	20889 VA / 277 V = 75 A		

① GFCI ② AFCI ③ AFCI/GFCI ④ SHUNT TRIP ⑤ SWD ⑥ HACR ⑦ LOCKABLE

OPTIONS: NONE - REFER TO SPECIFICATIONS

FEEDER OCPD AND CONDUCTOR CALCULATION

LOAD DESCRIPTION (LOAD IN KVA)	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	LOAD MULTIPLIER	FEEDER LOAD	NOTES
LIGHTING	0.00	1.00	0.00	1.25	0.00	
RECEPTACLES	0.00	50%>10	0.00	1.00	0.00	
LARGEST MOTOR	13.06	1.00	13.06	1.25	16.32	
OTHER MOTOR(S)	49.61	1.00	49.61	1.00	49.61	
HEATING	0.00	1.00	0.00	1.25	0.00	
CONTINUOUS LOADS	0.00	1.00	0.00	1.25	0.00	
NONCONTINUOUS LOADS	0.00	1.00	0.00	1.00	0.00	
KITCHEN EQUIPMENT QTY = 0	0.00	1.00	0.00	1.00	0.00	
DIVERSIFIED LOAD	0.00	1.00	0.00	0.50	0.00	
TOTAL KVA	**62.67**	-	-	-	**65.93**	
TOTAL AMPS	**75 A**	-	-	-	**79 A**	

PANELBOARD SCHEDULE — EXISTING — LW1

LOCATION: EQUIPMENT ROOM
C.B. RATING: 10 K.A.I.C.

WIRE SIZE	TYPE	VOLTAGE	PHASE	WIRE	MOUNTING	BUS (A)	LUG	TYPE	TYPE	WIRE SIZE
		208Y/120V	3	4	SURFACE	100	MLO	NEMA 4X		
		USE and/or AREA SERVED	C/B POLE	CIR	LOAD ØA / ØB / ØC	CIR	C/B POLE	USE and/or AREA SERVED		
				1	- / -	2	20/1	SPARE		
				3	- / -	4	20/1	SPARE		
		SPACE		5	- / -	6	20/1	SPARE		
				7	- / -	8	20/1	SPARE		
				9	- / 1500	10	20/1	OUTDOOR VACUUM		
		EXHAUST FAN	20/1	11	- / 696	12	20/1	SPARE		
		RCPT	20/1	13	180 / -	14	20/1	SPARE		
		SPARE	20/1	15	- / -	16				
		SPARE	20/1	17	- / -	18				
		SPARE	20/1	19	- / -	20		SPACE		
		SPARE	20/1	21	- / -	22				
		SPARE	20/1	23	- / -	24				
		SPARE	20/1	25	- / -	26				
		SPARE	20/1	27	- / -	28				
		SPARE	20/1	29	- / -	30				
TOTAL LOAD PER PHASE					180	1500	696	1500 VA / 120 V = 13 A		

① GFCI ② AFCI ③ AFCI/GFCI ④ SHUNT TRIP ⑤ SWD ⑥ HACR ⑦ LOCKABLE

OPTIONS: NONE - REFER TO SPECIFICATIONS

FEEDER OCPD AND CONDUCTOR CALCULATION

LOAD DESCRIPTION (LOAD IN KVA)	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	LOAD MULTIPLIER	FEEDER LOAD	NOTES
LIGHTING	0.00	1.00	0.00	1.25	0.00	
RECEPTACLES	0.00	50%>10	0.00	1.00	0.00	
LARGEST MOTOR	1.50	1.00	1.50	1.25	1.88	
OTHER MOTOR(S)	0.88	1.00	0.88	1.00	0.88	
HEATING	0.00	1.00	0.00	1.25	0.00	
CONTINUOUS LOADS	0.00	1.00	0.00	1.25	0.00	
NONCONTINUOUS LOADS	0.00	1.00	0.00	1.00	0.00	
KITCHEN EQUIPMENT QTY = 0	0.00	1.00	0.00	1.00	0.00	
DIVERSIFIED LOAD	0.00	1.00	0.00	0.50	0.00	
TOTAL KVA	**2.38**	-	-	-	**2.75**	
TOTAL AMPS	**7 A**	-	-	-	**8 A**	

REV NO.	BY	DATE	REVISION DESCRIPTION
		11/27/2020	ISSUE FOR PERMIT
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CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

ELECTRICAL SCHEDULE

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STATE OF TEXAS
SHARON S. BICKFORD
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PROFESSIONAL ENGINEER
12/04/2020

E-6-01

MECHANICAL ABBREVIATIONS

AMPERE	A(AMP)
ABOVE FINISHED FLOOR	AFF.
ABOVE FINISHED GRADE	AFG.
ADDENDUM	ADD.
ADJUSTABLE	ADJ.
AIR CONDITIONING	A/C
AIR HANDLER UNIT	AHU
APPROXIMATE(LY)	APPROX.
ARCHITECT(URAL)	ARCH('L).
AUTOMATIC	AUTO
AUXILIARY	AUX.
BUILDING	BLDG.
BOTTOM OF DUCT	BOD
BOTTOM OF PIPE	BOP
BRITISH THERMAL UNIT	BTU.
CAPACITY	CAP
CARBON DIOXIDE	CO2
CENTER	CTR.
CIRCLE	CIR.
CONDENSATE DRAIN	CD.
CONDENSING UNIT	C.U.
CONSTRUCTION	CONST.
CONTINUATION	CONT.
COOLING	CLG.
CUBIC FOOT PER MINUTE	CFM
DAMPER	DMPR.
DEGREE FAHRENHEIT	DegF.
DEMOLISH(ITION)	DEMO.
DIAMETER	DIA.
DIRECT EXPANSION	DX.
DIVISION	DIV.
DOWN	DN.
DOUBLE	DBL.
DRAWING(S)	DWG(S).
DRY BULB	D.B.
DUCTLESS SPLIT	D.S.
EXISTING	(E)
EAST	E.
ENTERING AIR TEMPERATURE	EAT.
EFFICIENCY	EFF.
ELECTRIC(AL)	ELEC.
ELEVATION	EL.
ENERGY EFFICIENCY RATIO	EER.
ENGINEER	ENGR.
ENTERING	ENT
EQUAL	EQ.
EQUIPMENT	EQPT.
ETCETERA	ETC.
EXHAUST FAN	E.F.
EXISTING	EXIST.
EXPOSED	EXP.
EXHAUST	EXH.
EXHAUST AIR	EA.
EXTERNAL	EXT
EXTERNAL STATIC PRESSURE	ESP.
FARENHEIT	F.
FINISH(ED)	FIN.('D)
FINISH FLOOR	F.F.
FLEXIBLE	FLEX.
FLOOR	FL.
FOOT/FEET	FT.
GALLONS PER MINUTE	GPM
GALVANIZED	GALV.
GAS HEATER	G.H.
GAUGE	GA.
GENERAL CONTRACTOR	G.C.
GROUND	GND.
GYPSUM BOARD	GYP.
HEATER	HTR.
HORSEPOWER	H.P.
HEATING, VENTILATION & AIR CONDITIONING	HVAC
HOT WATER	H.W.
HOT WATER RETURN	H.W.R.
HERTZ	HZ.
INFORMATION	INFO.
INCHES	IN.
INSULATION	INSUL.
INTERIOR	INT.
KILOWATT	KW
LEAVING AIR TEMPERATURE	LAT.
LEAVING	LVG.
LOUVER	L.
LONG RADIUS ELBOW	LRE.
MANUFACTURE(R)	MFR.
MAKEUP AIR	MA.
MAXIMUM	MAX.
1,000 BTU/HR	MBH.
MAXIMUM OVERCURRENT PROTECTION	MOCP
MECHANICAL	MECH.
METAL	MTL.
MINIMUM	MIN.
MIXED AIR TEMPERATURE	MAT.
MISCELLANEOUS	MISC.
MOTORIZED VOLUME DAMPER	MVD
MULTIPLE	MULT.
MANUAL VOLUME DAMPER	VD.
NOT APPLICABLE	N/A
NOISE CRITERIA	NC.
NATURAL	NAT.
NOMINAL	NOM.
NORTH	N.
NOT IN CONTRACT	N.I.C.
NOT TO SCALE	N.T.S.
NUMBER	NO./#
OUTSIDE AIR	OA
PARTIAL	PART.
PHASE	PH
POLYVINYL CHLORIDE	PVC
POUND(S)	LBS
POUNDS PER SQUARE INCH	PSI
PRESSURE DROP	PD.
QUANTITY	QTY.
RADIUS	R.
REFRIGERATION	REFRIG.
RECESSED	REC.
REINFORCE(ING)(ED)(MENT)	REINF.
RETURN AIR	R.A.
REQUIRE(D)	REQ.('D)
ROOF TOP UNIT	RTU
ROOM	RM.
SANITARY SEWER	S.S.
SCHEDULE	SCH.
SEASONAL ENERGY EFFICIENCY RATIO	SEER
SECTION	SECT.
SENSIBLE	SENS.
SMOKE DETECTOR	S.D.
SOUTH	S.
SPECIFICATION(S)	SPEC.('S)
SQUARE	SQ.
SQUARE FEET	SF
STAINLESS STEEL	SS.
SQUARE FEET	SF
STATIC PRESSURE	SP.
SUCTION	SUCT.
SUPPLY AIR	SA.
TEMPERATURE	TEMP.
TOP OF STEEL	T.O.S.
TYPICAL	TYP.
UNDERGROUND	U.G.
UNDERWRITER LABORATORIES INC.	U.L.
UNIT HEATER	U.H.
UNLESS NOTED OTHERWISE	U.N.O.
UTILITY	UTIL.
VOLTAGE	V.
VOLUME	VOL.
WATER GAUGE	WG.
WEIGHT	WT.
WEST	WEST
WET BULB	W.B.
WITH	W/
WITHOUT	W/O

NOTE: NOT ALL ABBREVIATIONS ON THIS LIST ARE APPLICABLE TO THIS PROJECT.

APPLICABLE CODES
2015 UMC
2012 IBC
2017 NEC
2015 IECC
2012 TAS

DESIGN CRITERIA	SUMMER	WINTER
OUTDOOR CONDITIONS BASED ON 1% ASHRAE	99	26
INDOOR CONDITIONS	75	72

MECHANICAL DEMO SYMBOL LEGEND

- DEMO SUPPLY AIR GRILLE
- DEMO RETURN AIR GRILLE
- DEMO EXHAUST AIR GRILLE
- CONDENSATE DRAIN PIPE
- DEMO CHILLED WATER RETURN
- DEMO CHILLED WATER SUPPLY
- DEMO HOT WATER RETURN
- DEMO HOT WATER SUPPLY
- EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, AND DAMPERS
- DEMOLITION
- DEMOLITION EQUIPMENT (AHU-XX)
- DEMO TERMINAL UNIT

PIPING SYMBOL LEGEND

- CHWS — CHILLED WATER SUPPLY
- CHWR — CHILLED WATER RETURN
- HHWS — HEATING HOT WATER SUPPLY
- HHWR — HEATING HOT WATER RETURN
- CD — CONDENSATE DRAIN
- CHWR — EXISTING CHILLED WATER RETURN
- CHWS — EXISTING CHILLED WATER SUPPLY
- HHWR — EXISTING HOT WATER RETURN
- HHWS — EXISTING HOT WATER SUPPLY

NOTE: NOT ALL SYMBOLS ON THIS LIST MAY BE APPLICABLE TO THIS PROJECT.

DRAFTING SYMBOLS

PLAN/DETAIL DESIGNATION

1 PLAN NAME/DETAIL TITLE
SCALE:
- SCALE
- VIEW NUMBER

ELEVATION MARK

X/SXXX
- DIRECTION OF VIEW FOR ELEVATION
- SHEET NUMBER
- SECTION NUMBER

SECTION MARK

X/SXXX
- SHEET NUMBER
- SECTION NUMBER
- DIRECTION OF VIEW FOR SECTION CUT

MECHANICAL CONTROLS SYMBOL LEGEND

- CO_2 — CARBON DIOXIDE SENSOR
- CO — CARBON MONOXIDE SENSOR
- T — THERMOSTAT
- H — HUMIDISTAT
- DP — DIFFERENTIAL PRESSURE SENSOR
- FS — FLOW SWITCH
- P — WELL PRESSURE SENSOR
- T — WELL TEMPERATURE SENSOR
- S — STARTER
- CT — CURRENT SWITCH
- HOA — HAND-OFF-AUTO SWITCH
- T — AVERAGING TEMPERATURE SENSOR
- T — SINGLE POINT TEMPERATURE SENSOR
- SD — SMOKE DETECTOR
- LT — LOW TEMPERATURE LIMIT SWITCH
- FILTER
- M — MOTOR
- OPPOSED BLADE DAMPER
- PARALLEL BLADE DAMPER
- M — MOTORIZED DAMPER
- C/C — CHILLED WATER COIL
- H/C — HEATING HOT WATER COIL
- ELECTRIC RESISTIVE HEAT COIL

NOTE: NOT ALL SYMBOLS ON THIS LIST MAY BE APPLICABLE TO THIS PROJECT.

MECHANICAL SYMBOL LEGEND

- TYPE/CFM — SUPPLY AIR GRILLE
- TYPE/CFM — RETURN AIR GRILLE
- TYPE/CFM — EXHAUST AIR GRILLE
- T — THERMOSTAT
- F/SD — COMBINATION FIRE/SMOKE DAMPER
- FD — FIRE DAMPER
- FLEXIBLE DUCT WORK
- MANUAL DAMPER
- M — MOTORIZED VOLUME DAMPER
- TAKEOFF WITH DAMPER
- TAKEOFF WITHOUT DAMPER
- SPIN-IN WITH DAMPER
- SPIN-IN WITHOUT DAMPER
- WALL CAP / LOUVER
- SIDEWALL GRILLE, SUPPLY AIR
- SIDEWALL GRILLE, RETURN / EXHAUST AIR
- MECHANICAL EQUIPMENT WITH CLEARANCES, SEE SCHEDULES
- CONDENSING UNIT w/ CLEARANCES SHOWN DASHED
- TRANSITION RECTANGULAR TO ROUND DUCT
- TURNINGVANE, 90 DEGREE ELBOW
- RADIUS ELBOW
- DOUBLE WALL SPIRAL DUCT
- R — INCLINED RISE, IN DIRECTION OF AIR FLOW
- D — INCLINED DROP, IN DIRECTION OF AIR FLOW
- CONNECT TO EXISTING
- DISCONNECT FROM EXISTING
- ##/## — SIZE OF RECTANGULAR DUCT WHERE FIRST NUMBER INDICATES WIDTH AND SECOND NUMBER INDICATES VERTICAL DIMENSION
- ##Ø — DIAMETER OF ROUND DUCT
- TERMINAL UNIT
- EXISTING DUCTWORK
- NEW DUCTWORK
- SUPPLY AIR DUCT UP
- SUPPLY AIR DUCT DOWN
- RETURN AIR DUCT UP
- RETURN AIR DUCT DOWN
- EXHAUST AIR DUCT UP
- EXHAUST AIR DUCT DOWN
- PIPE DOWN
- PIPE UP
- UNC — UNDERCUT DOOR FOR A 1" MIN. CLEARANCE

NOTE: NOT ALL SYMBOLS ON THIS LIST MAY BE APPLICABLE TO THIS PROJECT.

SHEET INDEX

MECHANICAL GENERAL NOTES

A. THE MECHANICAL WORK CONSISTS OF PROVIDING LABOR, MATERIALS, PRODUCTS, AND IN PERFORMING ALL OPERATIONS REQUIRED FOR THE COMPLETE OPERATING INSTALLATION OF ALL MECHANICAL SYSTEMS IN ACCORDANCE WITH SPECIFICATIONS, APPLICABLE DRAWINGS, TERMS, CONDITIONS OF THE CONTRACT AND ALL APPLICABLE CODES AND ORDINANCES GOVERNING THE INSTALLATION OF THE VARIOUS MECHANICAL SYSTEMS. ALL WORK SHALL BE FULLY CORRELATED WITH THE WORK OF OTHER CRAFTS.

B. EACH CONTRACTOR SHALL STUDY THE CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF WORK PROVIDED UNDER THIS CONTRACT, AS WELL AS TO ASCERTAIN THE DIFFICULTY TO BE ENCOUNTERED IN PERFORMING THE WORK ON THE DRAWINGS AND OUTLINED HEREINAFTER AND IN MAKING CONNECTIONS TO EXISTING UTILITIES, INSTALLING NEW EQUIPMENT AND SYSTEMS AND COORDINATING THE WORK WITH THE OTHER TRADES.

C. EXAMINATION OF SITE: THE CONTRACTOR SHALL THOROUGHLY EXAMINE SITE AND SATISFY HIMSELF AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY, AT THE SITE, ALL MEASUREMENTS AFFECTING HIS WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF SAME. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR EXPENSES DUE TO HIS NEGLECT TO EXAMINE OR FAILURE TO DISCOVER CONDITIONS WHICH AFFECT HIS WORK. NO EXTRA COMPENSATION WILL BE ALLOWED ON ACCOUNT OF DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND THOSE INDICATED ON THE DRAWINGS.

D. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.

E. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL HVAC WORK IS DIAGRAMMATIC AND IS INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. DO NOT SCALE DRAWINGS FOR EXACT LOCATION OF ITEMS SHOWN.

F. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, MANUFACTURER'S CERTIFIED DRAWING, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.

G. SHOULD DISCREPANCIES OCCUR WITHIN THE CONTRACT DOCUMENTS, THE MORE STRINGENT AND MORE COSTLY APPROACH SHALL APPLY FOR BIDDING PURPOSES. THE CONTRACTOR IS TO NOTIFY THE OWNER'S REPRESENTATIVE OF DISCREPANCIES FOR CLARIFICATION. CLARIFICATIONS ISSUED AFTER THE CONTRACT IS AWARDED ARE TO BE INCORPORATED BY THE CONTRACTOR AT NO ADDITIONAL COSTS AND ARE TO BE REVIEWED BY THE OWNER'S REPRESENTATIVE TO DETERMINE IF A REDUCTION IN COST IS JUSTIFIED.

H. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL FEES AND CHARGES TO ALL LOCAL AND OTHER RELATED AGENCIES AS REQUIRED.

I. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL, PLUMBING WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWING.

J. CONCRETE HOUSEKEEPING PADS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE THE SIZE AND LOCATION OF CONCRETE HOUSEKEEPING PADS WITH THE GENERAL CONTRACTOR

K. MECHANICAL CONTRACTOR SHALL COORDINATE ANY ROOF PENETRATION WITH ROOFING CONTRACTOR, ROOF SYSTEM MANUFACTURER, ARCHITECT, AND ALL OTHER TRADES INVOLVED. ALL ROOF PENETRATIONS SHALL BE REVIEWED AND APPROVED BY ROOF SYSTEM MANUFACTURER TO COMPLY WITH THE ROOFING WARRANTY.

L. MECHANICAL CONTRACTOR SHALL COORDINATE LOCATIONS AND SIZES OF ALL FLOOR AND WALL PENETRATIONS AND SHALL BE COORDINATED WITH STRUCTURAL, PLUMBING, ELECTRICAL, AND ARCHITECTURAL WORK.

HVAC GENERAL NOTES

A. COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING, AND OTHER CEILING ITEMS AND MAKE MINOR DUCT MODIFICATIONS TO SUIT.

B. ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVIDED DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

C. PROVIDE ACCESS DOORS IN DUCTWORK TO PROVIDE ACCESS FOR ALL ITEMS AND EQUIPMENT LOCATED IN THE DUCTWORK THAT REQUIRE SERVICE AND/OR INSPECTION.

DEMOLITION GENERAL NOTES

A. THE CONTRACTOR SHALL THOROUGHLY EXAMINE SITE AND SATISFY HIMSELF AS TO THE CONDITIONS UNDER WHICH THE DEMOLITION WORK IS TO BE PERFORMED. VERIFY ALL MECHANICAL ITEMS AND EQUIPMENT TO BE REMOVED PRIOR TO COMMENCING WORK.

B. THE CONTRACTOR IS TO CONFIRM WITH THE OWNER WHICH EQUIPMENT DESIGNATED TO BE DEMOLISHED IS TO BE TURNED OVER TO THE OWNER AND WHICH ARE TO BE LEGALLY DISPOSED OF.

REV NO.	BY	DATE	REVISION DESCRIPTION
		11/27/2020	ISSUE FOR PERMIT
		12/04/2020	ISSUED FOR CONSTRUCTION

ENCOTECH
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TBPE Firm 1141
8500 Bluffstone Cove, Suite B-103
Austin, Texas 78759 | 512.338.1101
Project No.: 20049.MS.AUS

CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

MECHANICAL GENERAL NOTES

CITY OF AUSTIN — FOUNDED 1839

NOTES	NAME	DATE
SURVEY BY		
DRAWN BY		
DESIGNED BY		
CHECKED BY		
REVIEWED BY		

STATE OF TEXAS
LUCAS COBE–PAUL STOCKBURGER
121003
LICENSED PROFESSIONAL ENGINEER
01/29/21

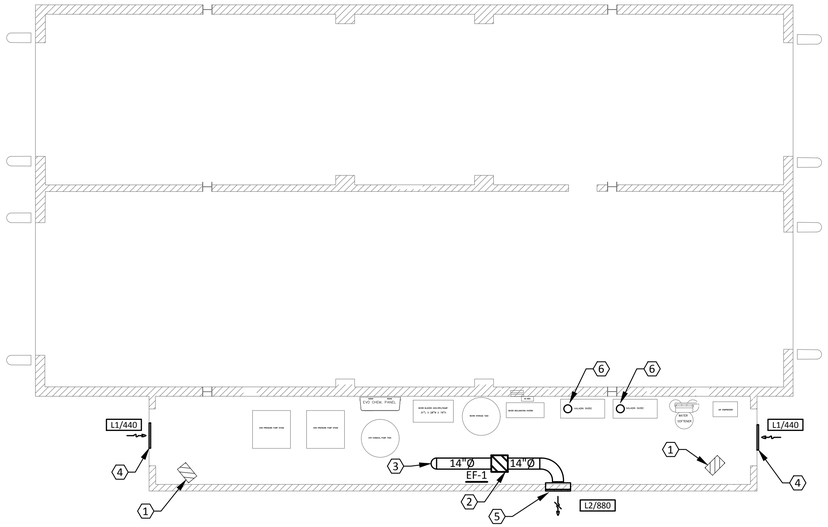
M-0-00

GENERAL SHEET NOTES

A. REFER TO GENERAL NOTES ON SHEET M-0-00 FOR ADDITIONAL INFORMATION.

KEYED NOTES

1. EXISTING UNIT HEATER TO REMAIN.
2. PROVIDE IN-LINE EXHAUST FAN WITH INTEGRAL BACKDRAFT DAMPER ABOVE CEILING SUPPORTED FROM TOP OF STRUCTURAL BEAM. REFER TO DETAIL 1/M-4-01.
3. PROVIDE 14"Ø EXHAUST DUCT FROM INLINE EXHAUST FAN, TERMINATING 3'-0" BELOW CEILING. PROVIDE WITH 3/4" WIRE MESH SCREEN AT DUCT INLET.
4. PROVIDE DOOR LOUVER FOR OUTSIDE AIR INTAKE LOUVER LOW IN WALL. MOUNT BOTTOM EDGE OF LOUVER AT 2'-0" A.F.F. REFER TO SCHEDULE.
5. PROVIDE EXHAUST AIR LOUVER HIGH IN WALL, FITTED WITHIN 8" GAP ALONG TOP OF WALL. COORDINATE EXACT LOUVER WITH AND HEIGHT WITH ACTUAL WALL CMU CONSTRUCTION. REFER TO SCHEDULE.
6. PROVIDE 10" DIAMETER FLUE FROM GAS FIRED PRESSURE WASHER EQUIPMENT UP TO ROOF MOUNTED FLUE. COORDINATE EXACT CONNECTION LOCATION WITH MANUFACTURER REQUIREMENTS. REFER TO FLUE DETAIL 2/M-4-01



1 MECHANICAL FLOOR PLAN - HVAC
SCALE: 1/8"=1'-0"

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ENGINEERING SERVICES DEPARTMENT

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MECHANICAL FLOOR PLAN - HVAC

CITY OF AUSTIN FOUNDED 1839

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STATE OF TEXAS
LUCAS CORE-PAUL STOCKBURGER
121003
LICENSED
PROFESSIONAL ENGINEER
01/29/21

M-1-01

EXHAUST FAN SCHEDULE

MARK	AREA SERVED	LOCATION	INTERLOCK	AIR DATA				ELECTRICAL DATA			UNIT DATA					
				CFM	S.P.	HP	RPM	FLA	MOCP	VOLT/PH	MAKE	MODEL	TYPE	DRIVE	LBS.	NOTES
EF-1	EQUIPMENT ROOM	CEILING	CONTINUOUS	880	0.3	0.22	1,083	4.8	15	115V/1PH	GREENHECK	CSP-A1050-VG	INLINE	DIRECT VARIABLE	49	DISC, SC, BDD, PP, VI

NOTES:

1. FEATURE NOTES:
   - DISC = DISCONNECT SWITCH
   - TD = PROVIDE AND INSTALL A TIME-DELAY-OFF RELAY SWITCH TO ALLOW FAN TO OPERATE UP TO 15 MINUTES AFTER LIGHTS ARE TURNED OFF
   - SC = EC MOTOR
   - BDD = BACKDRAFT DAMPER
   - RC = ROOF CURB
   - CC = CURB CAP
   - BS = BIRD SCREEN
   - PP = PROVIDE WITH POLY-PRO COATING
   - VI = VIBRATION ISOLATORS

LOUVER SCHEDULE

MARK	NOMINAL SIZE	MIN FREE AREA	(CFM)	TYPE	MAKE	MODEL	NOTES
L1	18"x24"	1.1	440	OUTSIDE AIR LOUVER	GREENHECK	ESD-635	1, 2, 3, 4, 5, 6
L2	32"x8"	2.2	880	EXHAUST AIR LOUVER	GREENHECK	ESD-635	1, 2, 3, 4, 5, 6

NOTES:

1. COORDINATE EXACT LOCATION AND MOUNTING OF LOUVER WITH ARCHITECTURAL ELEVATION.
2. COORDINATE COLOR AND FINISH WITH ARCHITECT.
3. AIRFLOW QUANTITIES AS NOTED ON MECHANICAL DRAWINGS.
4. PROVIDE WITH POLY-PRO COATING.
5. COORDINATE EXACT LOUVER WIDTH/HEIGHT WITH ACTUAL WALL CMU CONSTRUCTION.
6. PROVIDE GRAVITY BACKDRAFT DAMPER AND 1/4" GALVANIZED BIRDSCREEN MESH.

SEQUENCE OF OPERATION

SYSTEM DESCRIPTION

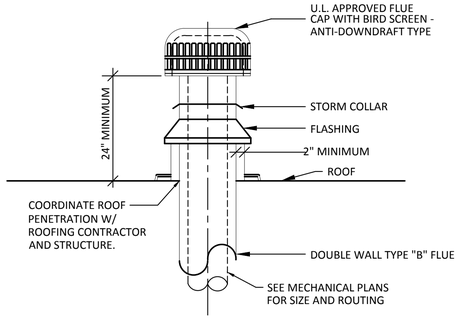
CEILING MOUNTED CONSTANT VOLUME EXHAUST FAN.

EXHAUST FAN CONTROL - EF-1

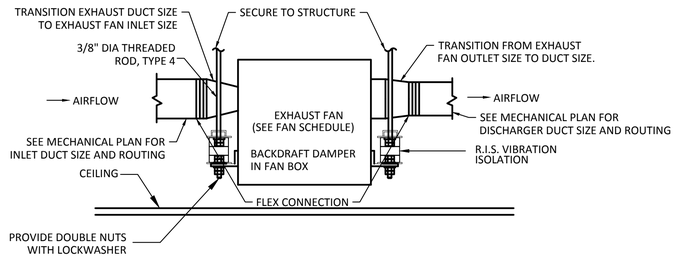
FAN MOTOR - ON/OFF CONTROL:

1. THE EXHAUST FAN SHALL RUN CONTINUOUSLY AND ONLY DEACTIVATED BY THE DISCONNECT SWITCH FOR MAINTENANCE AND REPAIR.

3 EF-1 SEQUENCE OF OPERATIONS
N.T.S.



2 GAS FLUE THRU ROOF DETAIL
N.T.S.



1 INLINE EXHAUST FAN DETAIL
N.T.S.

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CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

MECHANICAL SCHEDULES, DETAILS, AND CONTROLS

CITY OF AUSTIN
FOUNDED 1839

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01/29/21

M-4-01

PLUMBING ABBREVIATIONS

AMPERE	A(AMP)
ABOVE FINISHED FLOOR	AFF
ADJUSTABLE	ADJ.
AIR CONDITIONING	A/C
AIR HANDLER UNIT	AHU
APPROXIMATE(LY)	APPROX.
ARCHITECT(URAL)	ARCH('L)
BUILDING	BLDG
BRITISH THERMAL UNIT	BTU
CAST IRON	CI
CENTER	CTR
CLEAN OUT	CO
COLD WATER	CW
CONCRETE	CONC.
CONCRETE MASONRY UNIT	CMU
CONDENSATE DRAIN	COND
CONDENSING UNIT	CU
CONSTRUCTION	CONST.
CORRIDOR	CORR.
CUBIC FOOT PER HOUR	CFH
DEGREE FAHRENHEIT	DegF.
DEMOLISH(ITION)	DEMO
DETAIL	DET.
DIAMETER	DIA./Ø
DISCONNECT	DISC.
DISHWASHER BOX	DB
DIVISION	DIV.
DOMESTIC COLD WATER	DCW
DOMESTIC HOT WATER	DHW
DOMESTIC HOT WATER RECIRCULATION	DHWR
DOUBLE	DBL.
DOUBLE CLEAN OUT	DCO
DOWN	DN
DOWNSPOUT BOOT	DSB
DOWNSPOUT NOZZLE	DSN
DRAINAGE FIXTURE UNIT	DFU
DRAWING(S)	DWG(S)
EACH	EA.
EFFICIENCY	EFF.
ELECTRIC(AL)	ELEC.
ELECTRIC WATER COOLER	EWC
ELEVATION	ELEV.
ELEVATOR SUMP PUMP WASTE	EW
EMERGENCY EYE WASH	EEW
EMERGENCY EYE WASH & SHOWER	EEW/S
EMERGENCY MIXING VALVE	EMV
EMERGENCY SHOWER	ES
ENGINEER	ENGR.
EQUAL	EQ.
EQUIPMENT	EQPT.
ETCETERA	ETC.
EXHAUST FAN	EF
EXISTING	EXIST.
EXTERIOR CLEANOUT	ECO
EXPOSED	EXP.
EYE WASH	EW
FIRE DEPARTMENT CONNECTION	FDC
FIRE PROTECTION	FP
FINISH(ED)	FIN.('D)
FINISH FLOOR	FF
FIXTURE	FIXT.
FIXTURE UNIT	FU
FLEXIBLE	FLEX
FLOOR	FL.
FLOOR CLEAN OUT	FCO
FLOOR DRAIN	FD
FLOOR SINK	FS
FLUSH VALVE	FV
FOOT/FEET	FT
FROM FLOOR ABOVE	FFA
FROM FLOOR BELOW	FFB
GALLONS PER FLUSH	GPF
GALLONS PER MINUTE	GPM
GALVANIZED	GALV.
GAS HEATER	GH
GAS PIPING	G
GAS PRESSURE REGULATOR	GPR
GAUGE	GA.
GENERAL CONTRACTOR	G.C.
GREASE WASTE	GW
GROUND	GND.
GROUND CLEANOUT	GCO
GYPSUM BOARD	GYP.
HEATER	HTR
HEAT PUMP UNIT/HORSEPOWER	HP
HEATING, VENTILATION & AIR CONDITIONING	HVAC
HOSE BIBB	HB
HOT WATER	HW
HOT WATER RETURN	HWR
INFORMATION	INFO
INLET	IN.
INSPECTION PORTAL	IP
INSULATION	INSUL.
INVERT	INV.
JANITOR	JAN.
LAVATORY	LAV
LONG RADIUS ELBOW	LRE
MAN HOLE	MH
MANUFACTURE(R)	MFR.
MAXIMUM	MAX
MAXIMUM OVERCURRENT PROTECTION	MOCP
MECHANICAL	MECH
MEDIUM PRESSURE GAS	MPG
MEZZANINE	MEZZ
MINIMUM	MIN
MINIMUM CURRENT AMPACITY	MCA
MISCELLANEOUS	MISC.
MOP SINK	MS
MULTIPLE	MULT.
NOT APPLICABLE	N/A
NATURAL	NAT.
NATURAL GAS	NG
NOMINAL	NOM.
NON-FREEZE WALL HYDRANT	NWH
NORTH	N
NOT IN CONTRACT	N.I.C.
NOT TO SCALE	N.T.S.
NUMBER	NO./#
OUTSIDE AIR	OA
OUTLET	OUT.
OVERFLOW ROOF DRAIN	ORD
OVERFLOW STORM DRAIN	OSD
PANEL	PNL.
PARTIAL	PART.
PHASE	PH./Ø
POINT OF CONNECTION	POC
POLYVINYL CHLORIDE	PVC
POUND(S)	LBS
POUNDS PER SQUARE INCH	PSI
QUANTITY	QTY.
RADIUS	RAD
REFRIGERATOR BOX	RB
RECESSED	REC.
REINFORCE(ING)(ED)(MENT)	REINF.
RETURN AIR	RA
REQUIRE(D)	REQ.('D)
ROOF DRAIN	RD
ROOF TOP UNIT	RTU
ROOM	RM
SANITARY SEWER	SS
SCHEDULE	SCH
SECTION	SECT.
SHOWER	SH
SOUTH	S
SPECIFICATION(S)	SPEC(S)
SPRINKLER	SPRINK.
SQUARE	SQ.
SQUARE FEET	SF
STAINLESS STEEL	SST
STEEL	STL.
STORM DRAIN	SD
SUPPLY FIXTURE UNIT	SFU
TEMPORARY	TEMP.
TEXAS	TX
THROUGH	THRU.
TOTAL DEVELOPED LENGTH	TDL
TO FLOOR ABOVE	TFA
TO FLOOR BELOW	TFB
TOP OF STEEL	TOS
TRENCH DRAIN	TD
TYPICAL	TYP.
UNDERGROUND	UG
UNDERWRITER LABORATORIES INC.	UL
UNIT HEATER	UH
UNLESS NOTED OTHERWISE	U.N.O.
URINAL	UR
UTILITY	UTIL.
VENT	V
VENT THROUGH ROOF	VTR
VOLUME	VOL.
WALL CLEANOUT	WCO
WASTE WATER	WW
WATER CLOSET	WC
WATER HAMMER ARRESTOR	WHA
WATER HEATER	WH
WEIGHT	WT.
WITH	W/
WITHOUT	W/O

NOTE: NOT ALL ABBREVIATIONS ON THIS LIST ARE APPLICABLE TO THIS PROJECT.

PLUMBING GENERAL NOTES

A. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT LOCATION OF FIXTURES & EQUIPMENT.

B. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS, AND AS SPECIFIED AND REQUIRED BY CODE.

C. ELEVATIONS AS SHOWN ON THE DRAWINGS ARE TO THE BOTTOM OF ALL PRESSURE PIPING AND TO THE INVERT OF ALL GRAVITY PIPING.

D. MAINTAIN A MINIMUM OF 2 FEET OF GROUND COVER OVER ALL UNDERGROUND WATER MAINS AND UNDERGROUND SEWERS AND DRAINS.

E. PROVIDE SHUTOFF VALVES IN ALL DOMESTIC WATER PIPING SYSTEM BRANCHES.

F. UNLESS OTHERWISE NOTED, ALL DOMESTIC COLD WATER PIPING SHALL BE A MINIMUM ¾".

G. UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO THE UNDERSIDE OF THE SLAB, WITH SPACE FOR INSULATION IF REQUIRED.

H. INSTALL PIPING SO ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.

I. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING.

J. ALL PIPING SHALL CLEAR DOORS AND WINDOWS.

K. ALL PIPING SHALL GRADE TO LOW POINTS. PROVIDE HOSE END DRAIN VALVES AT THE BOTTOM OF ALL RISERS AND LOW POINTS.

L. UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES, AND IN LONG PIPING RUNS (100 FT. OR MORE) TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS.

M. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.

N. ALL VALVES AND STRAINERS SHALL BE THE FULL SIZE OF THE PIPE BEFORE REDUCING THE SIZE TO MAKE CONNECTIONS TO THE EQUIPMENT.

O. PROVIDE ALL PLUMBING FIXTURES AND EQUIPMENT WITH ACCESSIBLE STOPS.

P. ALL BALANCING VALVES AND BUTTERFLY VALVES SHALL BE PROVIDED WITH POSITION INDICATORS AND MAXIMUM ADJUSTABLE STOPS (MEMORY STOPS).

Q. ALL VALVES SHALL BE INSTALLED SO THE VALVE REMAINS IN SERVICE WHEN THE EQUIPMENT OR PIPING ON THE EQUIPMENT SIDE OF THE VALVE IS REMOVED.

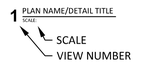
R. ALL PIPING WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED PRIOR TO INSTALLATION. OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

S. PROVIDE FLEXIBLE CONNECTIONS IN ALL PIPING SYSTEMS CONNECTED TO PUMPS AND OTHER EQUIPMENT THAT REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AS CLOSE TO THE EQUIPMENT AS POSSIBLE OR AS INDICATED ON THE DRAWINGS.

T. PROVIDE BACKFLOW PREVENTERS AT ALL LOCATIONS REQUIRED BY THE LATEST ADOPTED CODES AND ORDINANCES.

U. PROVIDE HEAT TRACE FOR EXPOSED PIPING AT 3 WATTS / FT.

PLAN/DETAIL DESIGNATION



PLUMBING LINE TYPES

- COLD WATER PIPING
- HOT WATER PIPING
- HOT WATER RETURN PIPING
- WASTE WATER PIPING
- VENT PIPING
- GAS PIPING
- FIRE PIPING
- STORM PIPING

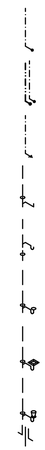
PLUMBING DEMOLITION LINE TYPES

- DEMOLITION COLD WATER PIPING
- DEMOLITION HOT WATER PIPING
- DEMOLITION WASTE WATER PIPING
- DEMOLITION GAS PIPING
- DEMOLITION FIRE PIPING
- DEMOLITION STORM PIPING

PLUMBING EXISTING LINE TYPES

- EXISTING COLD WATER PIPING
- EXISTING HOT WATER PIPING
- EXISTING WASTE WATER PIPING
- EXISTING VENT PIPING
- EXISTING GAS PIPING
- EXISTING FIRE PIPING
- EXISTING STORM PIPING

PLUMBING RISER SYMBOLS



- RISER COLD WATER GENERAL
- RISER COLD/HOT WATER LAVATORY
- RISER COLD WATER HOSE BIBB
- RISER WASTE WATER GENERAL
- RISER WASTE WATER LAVATORY
- RISER WASTE WATER FLOOR DRAIN
- RISER WASTE WATER FLOOR SINK
- RISER WASTE WATER HUB DRAIN
- RISER WASTE WATER VENT THROUGH ROOF

PLUMBING SYMBOLS

- POINT OF CONNECTION
- FCO — FLOOR CLEAN OUT - SEE SCHEDULE
- DCO — DOUBLE EXTERIOR CLEAN OUT
- CO — CLEAN OUT
- WCO — WALL CLEAN OUT
- FD — FLOOR DRAIN
- WHA — WATER HAMMER ARRESTER
- HB — HOSE BIBB
- NWH — NON-FREEZE WALL HYDRANT
- FS — FLOOR SINK
- BALL VALVE
- CHECK VALVE
- FLOW CONTROL VALVE
- GAS COCK
- GAS REGULATOR
- GATE VALVE
- OS&Y GATE VALVE
- STRAINER
- INSPECTION PORTAL
- PIPING UP
- PIPING DOWN
- PIPING TEE DOWN
- BFP — BACKFLOW PREVENTER

NOTE: NOT ALL SYMBOLS ON THIS LIST ARE APPLICABLE TO THIS PROJECT.

APPLICABLE CODES	
UPC	2015
CITY OF AUSTIN	LOCAL AMMENDMENTS

PLUMBING DRAWING TYPES

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		11/27/2020	ISSUE FOR PERMIT

ENGINEERING CONSULTANTS
TBPE Firm 1141
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Project No.: 20049.MS.AUS

CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

PLUMBING GENERAL NOTES

NOTES	NAME	DATE
SURVEY BY		
DRAWN BY		
DESIGNED BY		
CHECKED BY		
REVIEWED BY		

STATE OF TEXAS
SARAH MIGL
113112
LICENSED
PROFESSIONAL ENGINEER
11/27/2020

P-0-00

DEMOLITION NOTES

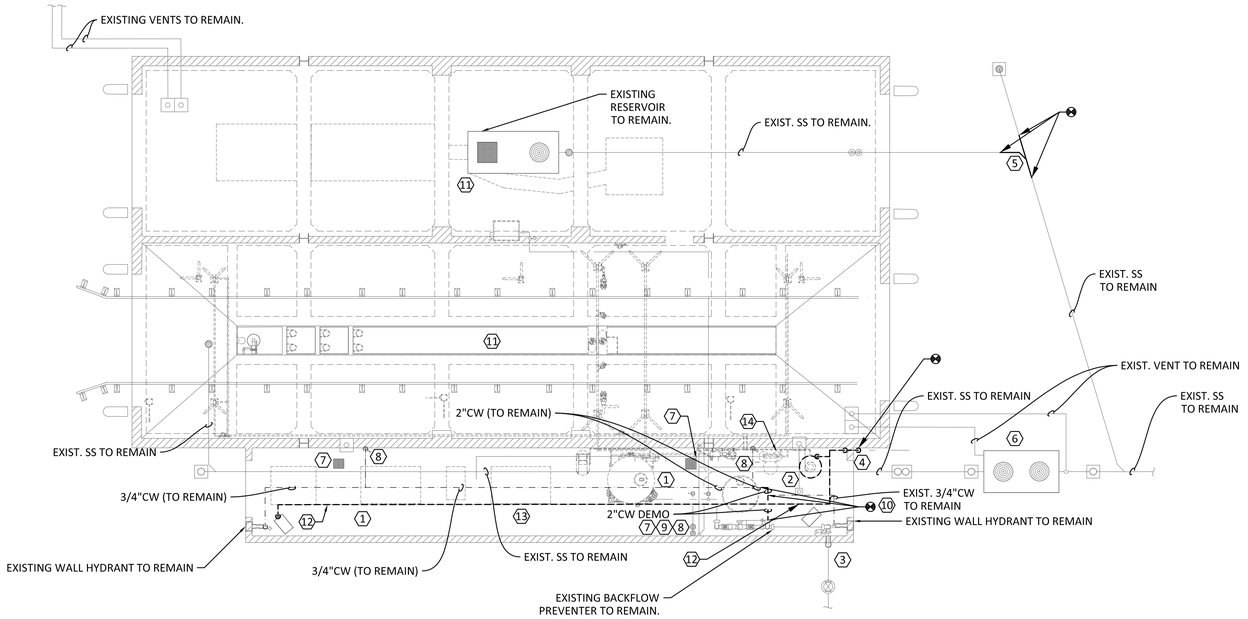
A. REFER TO GENERAL NOTES ON SHEET P-0-00 FOR ADDITIONAL INFORMATION.

B. EXISTING CONDITIONS ARE BASED ON EXISTING DRAWINGS AND SHALL BE FIELD-VERIFIED BY CONTRACTOR.

C. PIPING SHOWN ON PLANS THAT IS NOT ANNOTATED IS EXISTING TO REMAIN AND SHALL BE PROTECTED FROM DAMAGE DURING DEMOLITION AND NEW WORK.

KEYED NOTES

1. REMOVE EXISTING WATER RECLAMATION SYSTEM, TRUCK-WASHING EQUIPMENT, AND ASSOCIATED PLUMBING CONNECTIONS. EXISTING WATER RECLAMATION SYSTEM SHALL BE REMOVED WITH EXTREME CAUTION. W.E.T. REPRESENTATIVE SHALL BE PRESENT AT REMOVAL TO SECURE CONNECTIONS FOR FUTURE RECLAMATION SYSTEM.
2. REMOVE EXISTING WATER HEATER AND ASSOCIATED VALVES, PIPING, AND ACCESSORIES.
3. EXISTING INCOMING 3"CW LINE TO REMAIN. CONTRACTOR TO FIELD-VERIFY SIZE.
4. REMOVE INCOMING 1-1/4" LOW PRESSURE GAS LINE BACK TO REGULATOR. EXISTING MEDIUM PRESSURE 2" GAS LINE AND REGULATOR TO REMAIN. CONTRACTOR TO FIELD-VERIFY SIZE AND CAPACITY.
5. REMOVE EXISTING FITTING. REFER TO NEW WORK FOR REPLACEMENT FITTING.
6. EXISTING SAND/OIL INTERCEPTOR AND ASSOCIATED PLUMBING PIPING AND CONNECTIONS TO REMAIN.
7. ALL EXISTING DRAINS IN EQUIPMENT ROOM TO REMAIN.
8. EXISTING TRAP PRIMER TO REMAIN.
9. EXISTING EMERGENCY EYE WASH / SHOWER TO REMAIN.
10. DEMO EXISTING 2"CW LINE FROM EXISTING BACKFLOW PREVENTER TO LOCATION INDICATED.
11. ALL EXISTING ABOVE GRADE TRUCK WASH PIPING AND EQUIPMENT IN THE BAY SHALL BE REMOVED. REPAIR AND PATCH PER ARCHITECTURAL REQUIREMENTS.
12. GAS PIPING TO BE REMOVED.
13. VENT PIPING IN EQUIPMENT ROOM SHALL BE EXISTING TO REMAIN.
14. REMOVE EXISTING WATER SOFTENER AND ALL ASSOCIATED VALVES, PIPING, AND ACCESSORIES.



1 PLUMBING PLAN - DEMOLITION
SCALE: 1/8"=1'-0"

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ENGINEERING CONSULTANTS
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Project No.: 20049.MS.AUS

CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

PLUMBING PLAN - DEMOLITION

CITY OF AUSTIN FOUNDED 1839

NOTES	NAME	DATE
SURVEY BY		
DRAWN BY		
DESIGNED BY		
CHECKED BY		
REVIEWED BY		

STATE OF TEXAS
SARAH MIGL
113112
LICENSED PROFESSIONAL ENGINEER
11/27/2020

P-1-01

NOTES

A. REFER TO GENERAL NOTES ON SHEET P-0-00 FOR ADDITIONAL INFORMATION.

B. PROVIDE HEAT TRACE AT 3 W/FT FOR PIPING TO FAR BAY.

C. PIPING AND CONDUIT TO FAR BAY SHALL BE ROUTED THROUGH WALL AND OVER ROOF SO AS NOT OBSTRUCT WASH EQUIPMENT.

D. PROVIDE ACCESSIBLE VALVES WHERE VALVE SYMBOL IS INDICATED.

E. EXISTING CONDITIONS ARE BASED ON EXISTING DRAWINGS AND SHALL BE FIELD-VERIFIED BY CONTRACTOR.

F. PIPING SHOWN ON PLANS THAT IS NOT ANNOTATED IS EXISTING TO REMAIN AND SHALL BE PROTECTED FROM DAMAGE DURING DEMOLITION AND NEW WORK.

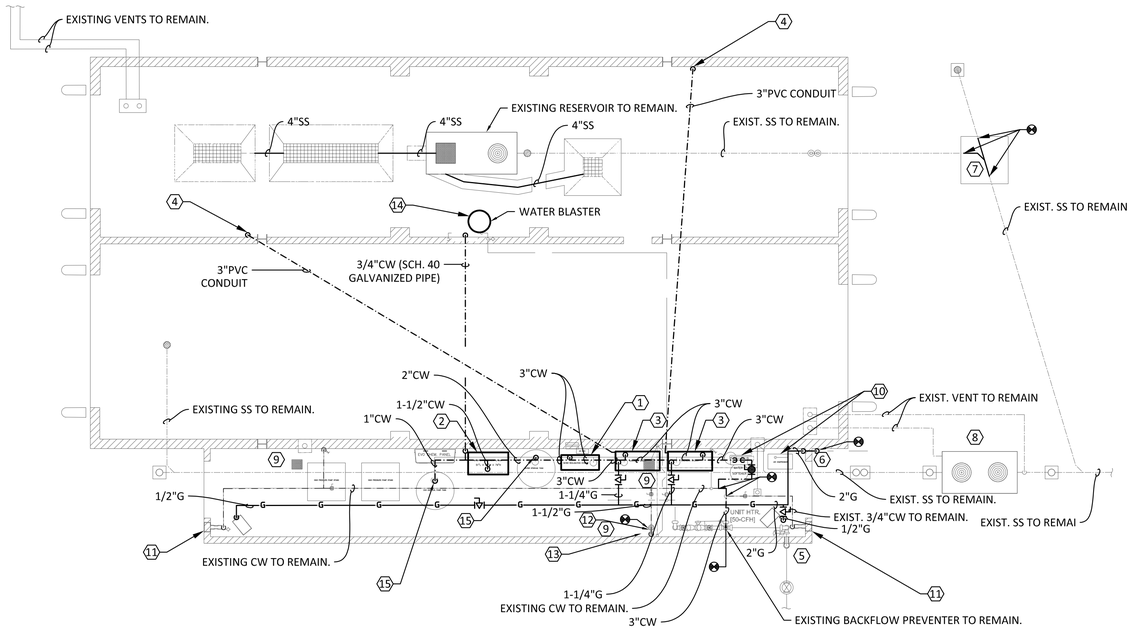
G. PROVIDE ISOLATION VALVES AT ALL EQUIPMENT.

H. REFER TO PLUMBING RISER FOR ALL VALVES, PIPING, AND ACCESSORIES.

I. ALL EXISTING ABOVE GRADE TRUCK WASH PIPING AND EQUIPMENT IN THE BAY SHALL BE REMOVED. REPAIR AND PATCH PER ARCHITECTURAL REQUIREMENTS.

KEYED NOTES

1. PROVIDE NEW 120 GPM WATER RECLAMATION SYSTEM, TO BE SERVED BY NEW 2"NON-POTABLE WATER (NPW) MAKE-UP LINE AND DRAINAGE CONNECTIONS TO EXISTING DRAINAGE SYSTEM. COORDINATE WITH W.E.T. REPRESENTATIVE.
2. PROVIDE NEW 25 GPM, 500 PSI HIGH PRESSURE CLEANING WATER BLASTER. SUPPLY NEW 3/4"CW SCHEDULE 40 GALVANIZED PIPE. COORDINATE WITH W.E.T. REPRESENTATIVE.
3. PROVIDE NEW 4 GPM, 400,000 CFH, 3,000 PSI AALADIN PRESSURE WASHER. COORDINATE WITH W.E.T. REPRESENTATIVE.
4. PROVIDE WALL MOUNT BOOM AND ASSEMBLY SERVING PRESSURE WASHER. SUPPLY 3"PVC CONDUIT FROM AALADIN PRESSURE WASHER EQUIPMENT TO BOOM.
5. EXISTING INCOMING 3"CW LINE TO REMAIN. CONTRACTOR TO FIELD-VERIFY SIZE.
6. PROVIDE NEW 2" LOW PRESSURE GAS LINE FROM EXISTING TO REMAIN REGULATOR. TOTAL LOAD OF 900 CFH. TOTAL DEVELOPED LENGTH OF 80 FEET.
7. REPLACE EXISTING FITTING WITH WYE FITTING.
8. EXISTING SAND/OIL INTERCEPTOR AND ASSOCIATED PLUMBING PIPING AND CONNECTIONS TO REMAIN.
9. ALL EXISTING DRAINS IN EQUIPMENT ROOM TO REMAIN.
10. REPLACE EXISTING WATER SOFTENER AND AIR COMPRESSOR. COORDINATE WITH W.E.T. REPRESENTATIVE.
11. EXISTING 3/4"CW CONNECTION TO WALL HYDRANT TO REMAIN.
12. EMERGENCY EYE WASH / SHOWER AND ASSOCIATED PLUMBING FIXTURE CONNECTIONS TO REMAIN.
13. EXISTING TRAP PRIMER TO REMAIN.
14. PROVIDE WATER BLASTER. SUPPLY 3/4"PVC CONDUIT FROM HIGH PRESSURE EQUIPMENT TO BLASTER.
15. 1" MAKEUP WATER TO TANK FILL.



1 PLUMBING PLAN - NEW WORK
SCALE: 1/8"=1'-0"

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CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

PLUMBING PLAN - NEW WORK

CITY OF AUSTIN
FOUNDED 1839

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STATE OF TEXAS
SARAH MIGL
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PROFESSIONAL ENGINEER
11/27/2020

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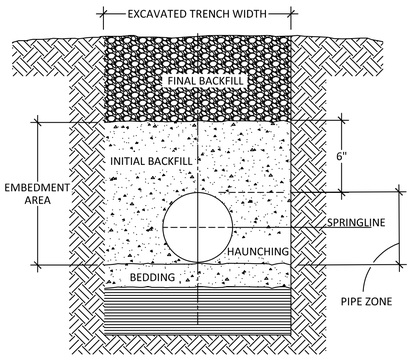


NOTES:

1. THE MINIMUM WIDTH OF THE TRENCH SHOULD BE THE PIPE OD (OUTSIDE DIAMETER) PLUS 16 INCHES OR THE PIPE OUTSIDE DIAMETER TIMES 1.25 PLUS 12 INCHES. THE SPACE BETWEEN THE PIPE AND TRENCH WALL MUST BE WIDER THAN THE COMPACTION EQUIPMENT USED TO COMPACT THE BACKFILL.

2. PROVIDE A MINIMUM OF 4 INCHES OF FIRM, STABLE AND UNIFORM BEDDING MATERIAL IN THE TRENCH BOTTOM. IF ROCK OR UNYIELDING MATERIAL IS ENCOUNTERED, A MINIMUM OF 6 INCHES OF BEDDING SHALL BE USED. BLOCKING SHOULD NOT BE USED TO CHANGE PIPE GRADE OR TO INTERMITTENTLY SUPPORT PIPE OVER LOW SECTIONS IN THE TRENCH.

3. THE PIPE SHOULD BE SURROUNDED WITH AN AGGREGATE MATERIAL WHICH CAN BE EASILY WORKED AROUND THE SIDES OF THE PIPE. BACKFILLING SHOULD BE PERFORMED IN LAYERS OF 6 INCHES WITH EACH LAYER BEING SUFFICIENTLY COMPACTED TO 85% TO 95% COMPACTION.

4. A MECHANICAL TAMPER IS RECOMMENDED FOR COMPACTING SAND AND GRAVEL. THESE MATERIALS CONTAIN FINE-GRAINS, SUCH AS SILT AND CLAY. IF A TAMPER IS NOT AVAILABLE, COMPACTING SHOULD BE DONE BY HAND.

5. THE TRENCH SHOULD BE COMPLETELY FILLED. THE BACKFILL SHOULD BE PLACED AND SPREAD IN UNIFORM LAYERS TO PREVENT ANY UNFILLED SPACES OR VOIDS. LARGE ROCKS, STONES, FROZEN CLODS, OR OTHER LARGE DEBRIS SHOULD BE REMOVED. STONE BACKFILL SHALL PASS THROUGH A 1-1/2" SIEVE. ROCK SIZE SHOULD BE ABOUT ONE-TENTH OF THE PIPE OUTSIDE DIAMETER. HEAVY TAMPERS OR ROLLING EQUIPMENT SHOULD ONLY BE USED TO CONSOLIDATE THE FINAL BACKFILL.

6. TO PREVENT DAMAGE TO THE PIPE AND DISTURBANCE TO PIPE EMBEDMENT, A MINIMUM DEPTH OF BACKFILL ABOVE THE PIPE SHOULD BE MAINTAINED. PIPE SHOULD ALWAYS BE INSTALLED BELOW THE FROST LEVEL. TYPICALLY, IT IS NOT ADVISABLE TO ALLOW VEHICULAR TRAFFIC OR HEAVY CONSTRUCTION EQUIPMENT TO TRAVERSE THE PIPE TRENCH.

7. INSTALL PIPING IN ACCORDANCE WITH ASTM D2321 FOR UNDERGROUND GRAVITY SYSTEMS AND ASTM D2774 FOR UNDERGROUND PRESSURE PIPING.

4 UNDERGROUND INSTALLATION OF PLASTIC PIPE
N.T.S.

GAS LOAD CALCULATION				
PRESSURE WASHER	1 x	400 MBH =	400 MBH
PRESSURE WASHER	1 x	400 MBH =	400 MBH
EXISTING UNIT HEATER	2 x	50 MBH =	100 MBH
TOTAL MBH		=	900 MBH
900 MBH = 900 CUBIC FOOT PER HOUR (CFH)			
VERTICAL PIPE LENGTH		=	10 FEET
HORIZONTAL PIPE LENGTH METER TO LAST FIXTURE		=	70 FEET
TOTAL PIPE LENGTH		=	80 FEET
USE 2" LOW PRESSURE (LESS THAN 2.0 PSI) GAS SUPPLY LINE			

WASTE WATER SIZING			
MANUAL BAY (MAX FLOW 33 GPM)	1 x	44.0 F.U. =	44.0 F.U.
4" FLOOR DRAIN/FLOOR SINK	4 x	8.0 F.U. =	32.0 F.U.
AUTOMATIC BAY	1 x	8.0 F.U. =	8.0 F.U.
TOTAL FIXTURE UNITS		=	84.0 F.U.
EXISTING 4 INCH WASTEWATER LINE FROM BUILDING AT 1/4IN/FT IS ADEQUATE.			

WATER CALCULATION			
EMERGENCY EYE WASH / SHOWER	1 x	23.0 GPM =	23.0 GPM
TRUCK WASH EQUIPMENT	1 x	74.0 GPM =	74.0 GPM
FIRST HOSE BIBB	1 x	2.5 F.U. =	2.5 F.U.
ADDITIONAL HOSE BIBBS	2 x	1.0 F.U. =	2.0 F.U.
4.5 FIXTURE UNITS		=	9.0 GPM
TOTAL GPM		=	106.0 GPM
HIGHEST FIXTURE = 10 FEET			
(10 FT.) x 0.43 = 4.3 PSI STATIC LOSS			
HORIZONTAL PIPE LENGTH TAP TO METER (FIELD-VERIFY)		=	10 FEET
HORIZONTAL PIPE LENGTH METER TO BUILDING (FIELD-VERIFY)		=	50 FEET
HORIZONTAL PIPE LENGTH BUILDING TO LAST FIXTURE		=	85 FEET
VERTICAL PIPE LENGTH BUILDING RISE TO HIGHEST FIXTURE		=	10 FEET
TOTAL PIPE LENGTH		=	155 FEET
(155 FT.) x 1.25 (FITTING LOSS) = 194 FEET TOTAL DEVELOPED LENGTH			

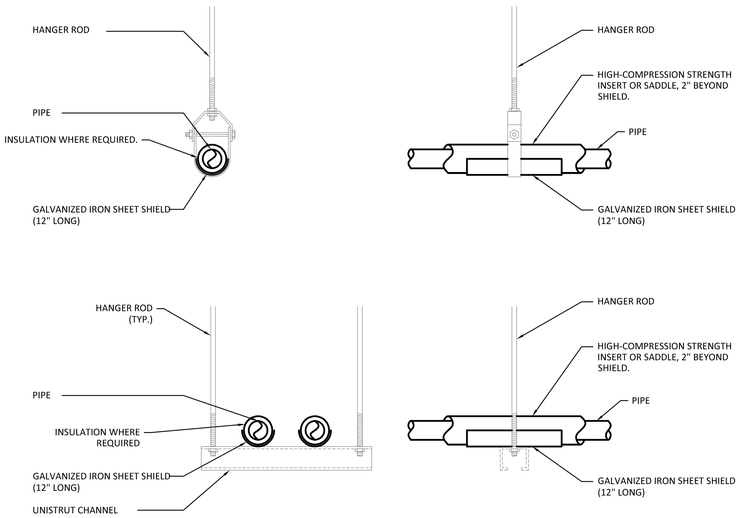
SIZE	DEVICE	PSI LOSS
2"	METER (FIELD-VERIFY) =	9.8 PSI
	STATIC =	4.3 PSI
	BACKFLOW PREVENTER =	12.0 PSI
	EQUIPMENT =	30.0 PSI
	TOTAL BUILDING LOSS =	56.1 PSI

PRESSURE AT STREET (FIELD-VERIFY)	=	65.0 PSI
BUILDING LOSS	=	56.1 PSI
DIFFERENCE	=	8.9 PSI
(8.9 / 194) x 100 = 4.6	MAX PSI DROP ALLOWABLE PER 100 FT. PIPE LENGTH	
EXISTING 2"METER AND 3"CW MAIN LINE TO BUILDING IS SUFFICIENT (CONTRACTOR SHALL FIELD-VERIFY).		

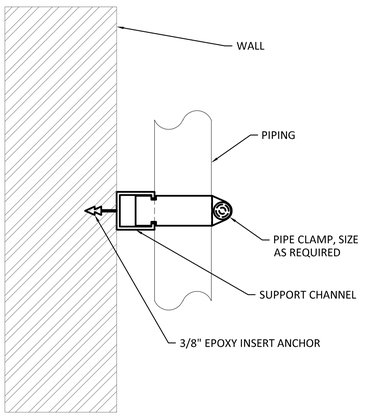
WATER CALCULATION NOTES
- THIS CALCULATION IS BASED ON UNIFORM PLUMBING CODE 2015, APPENDIX A. * VERIFY PRESSURE AT TIME OF CONSTRUCTION. IF GREATER THAN 65 PSI PROVIDE AND INSTALL PRESSURE REDUCING VALVE TO REDUCE WATER PRESSURE TO 65 PSI MAXIMUM.

NOTE:

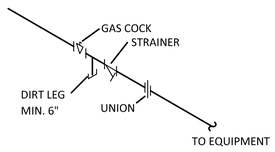
1. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL STRUCTURE TO THE TOP CHORD OF JOISTS OR BEAM.
2. PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE.



3 PIPE HANGERS DETAIL
N.T.S.



2 VERTICAL PIPING SUPPORT (CONCRETE WALL)
N.T.S.



1 TYPICAL LOW PRESSURE GAS EQUIPMENT CONNECTION
N.T.S.

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CITY OF AUSTIN, TX
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

PLUMBING SCHEDULES, CALCULATIONS, AND DETAILS

CITY OF AUSTIN
FOUNDED 1839

NOTES	NAME	DATE
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REVIEWED BY		

STATE OF TEXAS
SARAH MIGL
13112
LICENSED
PROFESSIONAL ENGINEER
11/27/2020

P-3-01

NOTES

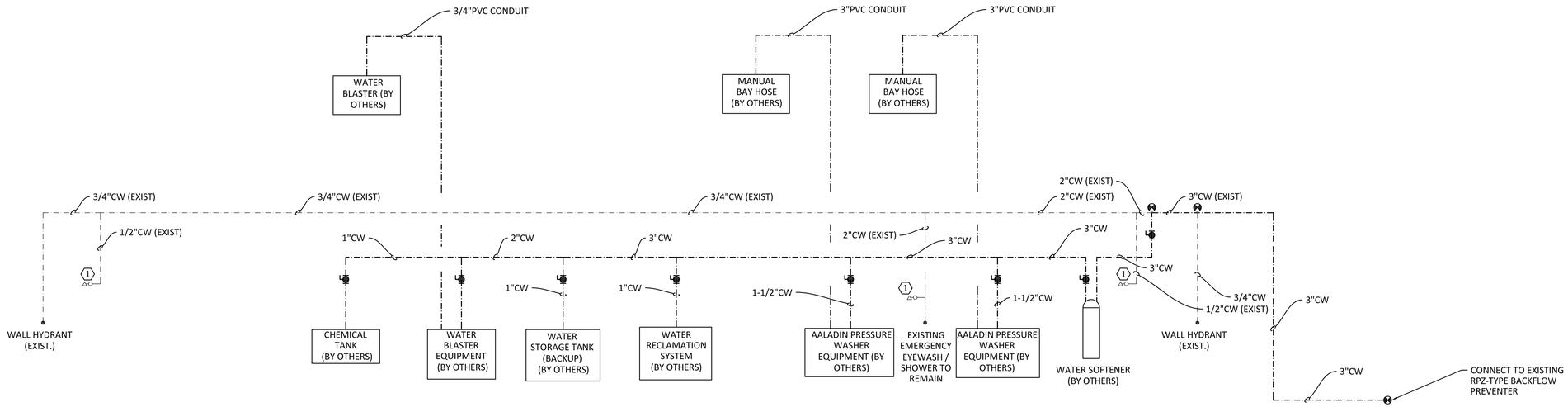
A. REFER TO GENERAL NOTES ON SHEET P-0-00 FOR ADDITIONAL INFORMATION.

B. RISERS ARE DRAWN SCHEMATICALLY AND INTENDED TO CLARIFY SIZES OF PIPING. REFER TO PLANS FOR ROUTING OF PIPING.

C. EXISTING CONDITIONS ARE BASED ON EXISTING DRAWINGS AND SHALL BE FIELD-VERIFIED BY CONTRACTOR.

KEYED NOTES

1. EXISTING TRAP PRIMER TO REMAIN.



1 PLUMBING DOMESTIC WATER RISER
N.T.S.

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CITY OF AUSTIN, TX
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ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

PLUMBING RISERS

CITY OF AUSTIN FOUNDED 1839

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REVIEWED BY		

STATE OF TEXAS
SARAH MIGL
113112
LICENSED
PROFESSIONAL ENGINEER
11/27/2020

P-6-01

NOTES

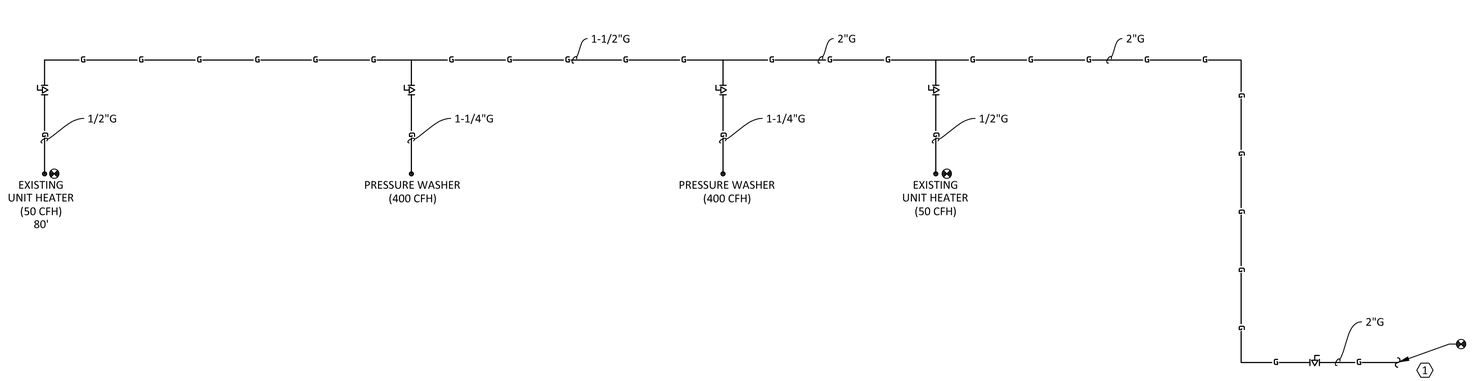
A. REFER TO GENERAL NOTES ON SHEET P-0-00 FOR ADDITIONAL INFORMATION.

B. RISERS ARE DRAWN SCHEMATICALLY AND INTENDED TO CLARIFY SIZES OF PIPING. REFER TO PLANS FOR ROUTING OF PIPING.

C. EXISTING CONDITIONS ARE BASED ON EXISTING DRAWINGS AND SHALL BE FIELD-VERIFIED BY CONTRACTOR.

KEYED NOTES

1. CONNECT NEW 2" LOW PRESSURE (LESS THAN 2 PSI) NATURAL GAS PIPING TO EXISTING METER. TOTAL LOAD OF 900 CFH. TOTAL DEVELOPED LENGTH OF 80 FEET.



1 PLUMBING NATURAL GAS RISER
N.T.S.

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DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DEPARTMENT

KGSC TRUCK WASH FACILITY
PROPOSED IMPROVEMENTS

PLUMBING RISERS

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STATE OF TEXAS
SARAH MIGL
113112
LICENSED
PROFESSIONAL ENGINEER
11/27/2020

P-6-02

GENERAL NOTES

1. THESE GENERAL NOTES SHALL APPLY UNLESS OTHERWISE SPECIFICALLY NOTED ON PLANS AND DETAILS.

2. CONSTRUCTION WORKMANSHIP, AND MATERIALS SHALL COMPLY WITH THE 2015 INTERNATIONAL BUILDING CODE (IBC).

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SHALL COORDINATE ALL STRUCTURAL PLANS AND DETAILS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND CIVIL DRAWINGS BEFORE STARTING WORK. IN CASE OF DISCREPANCY, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF SAME IN A TIMELY MANNER.

4. COMPLETE SHOP DRAWINGS FOR THE STRUCTURAL WORK SHALL BE SUBMITTED FOR REVIEW PRIOR TO COMMENCEMENT OF CONSTRUCTION IN ACCORDANCE WITH THE SPECIFICATIONS. REVIEW OF SHOP DRAWINGS BY THE ARCHITECT/ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR CORRECT FABRICATION AND CONSTRUCTION OF THE WORK.

5. THE STRUCTURAL DRAWINGS SHALL NOT BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTHS, OR FIT OF MATERIALS.

6. PRINCIPAL OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, HVAC AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS AND SIMILAR DETAILS NOT SHOWN. SIZE AND LOCATION OF ALL OPENINGS SHALL BE VERIFIED BY THE CONTRACTOR. ANY DEVIATION FROM OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEERS ATTENTION PRIOR TO CONSTRUCTION.

7. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKERS AND ALL OTHER PERSONS DURING CONSTRUCTION.

8. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING OF ALL STRUCTURAL WORK AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY CONDITION WHICH, IN HIS OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS IN THE STRUCTURE.

9. CONSTRUCTION MATERIALS SHALL NOT BE STORED ON FLOORS OR ROOFS IN EXCESS OF THE DESIGN LIVE LOADS. IMPACT SHALL BE AVOIDED WHEN PLACING MATE

SUBGRADE PREPARATION

1. AFTER EXISTING SUBGRADE HAS BEEN EXCAVATED TO FACILITATE THE CONSTRUCTION OF TRENCH AND PIT, BACKFILL TRENCH WITH NORMAL SET CONTROLLED LOW STRENGTH MATERIAL PER COA SPEC ITEM 402S AS NEEDED PRIOR TO CONSTRUCTION OF REINFORCED TRENCH, PIT AND SLAB. SEE DRAWINGS FOR CONCRETE AND WATERSTOP DETAILS.

SLAB-ON-GRADE NOTES

1. FLOOR SLAB SHALL BE PLACED OVER A 15 MIL VAPOR RETARDER. TAPE ALL SEAMS, PENETRATIONS AND TEARS IN THE VAPOR RETARDER WITH A COMPATIBLE WATERPROOF TAPE. SEE FLOOR PLAN FOR SLAB THICKNESS.

2. REINFORCE SLAB AS SHOWN ON FLOOR PLAN. REBARS SHALL BE PLACED AND SUPPORTED ON CHAIRS OR CONCRETE BRIQUETS, AT SLAB MID DEPTH.

3. PROVIDE THE FOLLOWING JOINTS TO ALIGN WITH EXISTING SLAB JOINTS:

   A. CONSTRUCTION JOINTS.
   B. SAW CUT CONTROL JOINTS ELSEWHERE 1" DEEP OR ONE QUARTER OF THE SLAB DEPTH DEEP, WHICHEVER IS GREATER.

4. CUT SAW CUT JOINTS WITHIN 8 HOURS OF POURING CONCRETE.

5. SLAB SURFACE FINISH SHALL MATCH THE EXISTING SLAB.

VAPOR BARRIER NOTES

1. A VAPOR BARRIER SHALL BE PLACED UNDER THE CONCRETE SLAB. THE VAPOR BARRIER SHALL CONSIST OF A POLYETHYLENE OR POLYOLEFIN RESIN GEOMEMBRANE THAT MEETS THE FOLLOWING REQUIREMENTS:

   a. MEET OR EXCEED THE CLASS A REQUIREMENTS OF ASTM E1745
   b. WATER VAPOR TRANSMISSION RATE (WVTR) OF 0.006 GRAINS (0.012 PERMS) OR LESS PER SQUARE FOOT IN ACCORDANCE WITH ASTM E96
   c. MINIMUM PUNCTURE RESISTANCE OF 2445 GRAMS IN ACCORDANCE WITH ASTM D1709
   d. MINIMUM TENSILE STRENGTH OF 76.6 PLF/INCH IN ACCORDANCE WITH ASTM D882
   e. MINIMUM THICKNESS OF 15 MILS

2. ACCEPTABLE PRODUCT IS STEGO WRAP CLASS A VAPOR BARRIER BY STEGO INDUSTRIES LLC, SAN JUAN CAPISTRANO, CALIFORNIA, OR APPROVED EQUAL.

3. VAPOR BARRIER SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. SPECIAL ATTENTION SHALL BE PAID TO THE VAPOR BARRIER INSTALLATION AT PIPE AND CONDUIT PENETRATIONS.

4. LAP JOINTS IN VAPOR BARRIER A MINIMUM OF 6 INCHES AND SEAL CONTINUOUSLY WITH A PRESSURE SENSITIVE, HIGH-DENSITY POLYETHYLENE TAPE MANUFACTURED SPECIFICALLY FOR THE USE OF SEALING VAPOR BARRIER LAPS. THE TAPE SHALL MEET THE FOLLOWING REQUIREMENTS:

   a. WATER VAPOR TRANSMISSION RATE (WVTR) OF 0.3 PERMS OR LESS PER SQUARE FOOT IN ACCORDANCE WITH ASTM E96

   b. MINIMUM TAPE WIDTH OF 4 INCHES

5. THE VAPOR BARRIER SHALL BE CONTINUOUS UNDER THE SLAB. THE VAPOR BARRIER SHALL BE INSTALLED SMOOTH AND LEVEL. BUNCHING WILL NOT BE PERMITTED AND SHALL BE CORRECTED PRIOR TO CONCRETE PLACEMENT.

6. CAREFULLY INSPECT VAPOR BARRIER FOR DAMAGE, TEARS OR PENETRATIONS PRIOR TO CONCRETE PLACEMENT. ALL DAMAGED AREAS SHALL BE REPAIRED BY CUTTING PATCHES OF VAPOR BARRIER, OVERLAPPING DAMAGED AREA 6 INCHES AND TAPING ALL EDGES.

CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE (ACI) SPECIFICATION, ACI #301 & BUILDING CODE REQUIREMENTS, ACI #318, LATEST EDITION, FOR BUILDING STRUCTURES.

2. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI #315, LATEST EDITION.

3. UNLESS SHOWN OTHERWISE IN THE SPECIFICATIONS, CONCRETE SHALL BE CLASS 'S' CONCRETE WITH 4000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS. ALSO REFER TO SPECIFICATIONS FOR ADDITIONAL CONCRETE MIX DESIGN REQUIREMENTS.

4. REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60.

5. STANDARD PROTECTIVE COVER OF REINFORCING BARS UNLESS OTHERWISE NOTED SHALL BE:

   WHERE CAST AGAINST DIRT OR FILL.....3 IN
   WHERE CAST AGAINST SEAL SLAB.....2 IN
   EXPOSED TO EARTH, WATER, OR WEATHER.....2 IN
   SLABS AND WALLS.....2 IN
   OTHER.....2 IN

6. CONCRETE SLUMPS SHALL BE AS FOLLOWS:

   SLAB ON METAL DECK---------- 4" MAX, 2" MIN
   PIERS ---------- 7" MAX, 5" MIN
   CONCRETE CONTAINING HRWR------- 10" MAX
   ALL OTHER CONCRETE ---------- 5" MAX, 2" MIN

7. ALL ACCESSORIES SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI #315, LATEST EDITION. ACCESSORIES FOR INTERIOR CONCRETE SURFACES EXPOSED TO VIEW SHALL HAVE PLASTIC COATED FEET. ACCESSORIES FOR CONCRETE SURFACES EXPOSED TO EARTH, WEATHER, WATER, OR HIGH HUMIDITY SHALL BE FABRICATED OF STAINLESS STEEL OR PLASTIC. PROVIDE BOLSTERS AT SUSPENDED SLABS, WALLS AND WIDE BEAMS. PROVIDE STANDEES AT ALL SLABS WITH TWO LAYERS OF REINFORCING. FOR SLAB-ON-GRADE REINFORCING, PROVIDE CHAIRS MANUFACTURED FROM HOT-DIPPED GALVANIZED STEEL, STAINLESS STEEL, PLASTIC, OR PRECAST CONCRETE BLOCKS OF EQUAL OR GREATER COMPRESSIVE STRENGTH AS THE CONCRETE BEING POURED.

8. MAINTAIN A MINIMUM OF ONE BAR DIAMETER (BUT NOT LESS THAN 1") BETWEEN ALL CONTINUOUS REINFORCING BARS ON ALL SLABS. MAINTAIN A MINIMUM OF 1-1/2" BETWEEN BARS IN COLUMNS, AND A MINIMUM OF 1-1/2 TIMES THE MAXIMUM COARSE AGGREGATE SIZE IN ALL CASES.

9. BARS SCHEDULED AND DETAILED "CONT" SHALL BE LAPPED ACCORDING TO STANDARD TENSION LAP LENGTHS TABLE UNLESS OTHERWISE NOTED. THE SPLICES SHALL OCCUR AT MIDSPAN FOR TOP BARS AND OVER THE SUPPORTS FOR BOTTOM BARS.

10. ANY PROPOSED PENETRATIONS NOT MEETING ALL OF THE BELOW CRITERIA SHALL NOT BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER:

    a. NO PENETRATIONS ARE TO BE LARGER THAN 2" (2 1/2 SLEEVE) IN DIAMETER FOR BEAMS LESS THAN 18" WIDE. NO PENETRATIONS ARE TO BE LARGER THAN 4" (5" SLEEVE) IN DIAMETER FOR BEAMS GREATER THAN 18" WIDE.
    b. NO PENETRATIONS ARE TO BE CLOSER THAN 4" TO ANY EDGE OF BEAMS.
    c. PENETRATIONS LARGER THAN 3/4" (1" SLEEVE) DIAMETER MUST BE IN THE MIDDLE THIRD OF THE BEAM SPAN.
    d. ONLY ONE (1) VERTICAL PENETRATION MAY OCCUR ACROSS THE WIDTH OF A BEAM. MULTIPLE VERTICAL PENETRATIONS OCCURRING ALONG THE LENGTH OF A BEAM ARE TO BE SPACED A MINIMUM OF 6" ON CENTER AND HAVE AT LEAST ONE STIRRUP BETWEEN THEM.
    e. ALL HORIZONTAL PENETRATIONS ARE TO BE IN THE MIDDLE THIRD OF THE BEAM OR JOIST DEPTH. MULTIPLE HORIZONTAL PENETRATIONS OCCURRING ALONG THE LENGTH OF A BEAM OR JOIST ARE TO BE SPACED A MINIMUM OF 6" ON CENTER AND HAVE AT LEAST ONE STIRRUP BETWEEN THEM.

11. SHOP DRAWINGS SHALL BE PREPARED FOR ALL REINFORCING STEEL AND SUBMITTED FOR REVIEW BY ENGINEER. ENGINEERING DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS.

12. WELDING OF REINFORCING BARS SHALL NOT BE PERMITTED, UNLESS APPROVED BY ENGINEER.

13. DURING PLACEMENT OF CONCRETE, USE TREMIE OR OTHER MEANS TO LIMIT FREE FALL OF CONCRETE TO 5'-0".

14. VERTICAL REINFORCING, DOWEL, AND LAPS ARE OFFSET IN DETAILS FOR CLARITY. BARS SHOULD BE CONSIDERED TO BE IN THE SAME PLANE AT EXTERNAL FACE.

15. CONCRETE PLACED BY PUMPING SHALL MEET THE FOLLOWING REQUIREMENTS:

    a. COARSE AGGREGATE (AGG) SHALL BE GRADED FROM A MAXIMUM OF 1 1/2".
    b. MAXIMUM ALLOWABLE INCREASE IN CEMENT FACTOR SHALL BE 1/2 SACK PER CUBIC YARD OVER NORMAL MIX DESIGN.
    c. MAXIMUM WATER CEMENT RATIO WILL CONFORM TO REQUIREMENTS STATED IN THE PROJECT SPECIFICATIONS. IF MORE WORKABILITY IS REQUIRED, AN ADMIXTURE MAY BE USED.
    d. MAXIMUM WEIGHT RATIO OF FINE AGGREGATES TO COARSE AGGREGATES (AGG) SHALL NOT EXCEED 2/3.
    e. REFER TO ACI 301, LATEST EDITION, SECTION 800, FOR OTHER PUMPING REQUIREMENTS.
    f. IN NO CASE SHALL CONCRETE BE PUMPED THROUGH AN ALUMINUM TUBE

16. NO HORIZONTAL JOINTS WILL BE PERMITTED IN SLABS OR BEAMS UNLESS SPECIFICALLY SHOWN ON DRAWINGS. CONTRACTOR MUST SUBMIT VARIANCE IN CONSTRUCTION JOINT LOCATIONS FOR REVIEW BY ENGINEER.

17. WELDED WIRE FABRIC (WWF) SHALL BE SUPPLIED IN FLAT SHEETS ONLY. NO ROLLS ARE PERMITTED.

18. USE 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.

TRENCH SAFETY

1. THE CONTRACTOR SHALL PROVIDE TRENCH SAFETY DESIGN DOCUMENTS PREPARED AND SEALED BY A QUALIFIED REGISTERED PROFESSIONAL ENGINEER AS REQUIRED BY ALL LOCAL AND STATE LAWS. SAID ENGINEER SHALL ALSO BE RESPONSIBLE FOR ON SITE OBSERVATIONS. THE TRENCH SAFETY DESIGN DOCUMENTS SHALL BE FILED WITH THE APPROPRIATE GOVERNMENT AGENCY. THE CONTRACTOR SHALL FURNISH A SEPARATE AND DISTINCT PRICE FOR TRENCH SAFETY SYSTEM THAT MEETS OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION STANDARDS.

SHOP DRAWING REVIEW AND SUBMITTAL NOTES

1. REFER TO PROJECT SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS.

   SHOP DRAWINGS AND SUBMITTALS WILL BE REVIEWED FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS.

   SUBMITTAL REVIEW WILL NOT BE CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER DETAILED INFORMATION SUCH AS DIMENSIONS AND QUANTITIES, OR FOR SUBSTANTIATING INSTRUCTIONS FOR INSTALLATION OR PERFORMANCE OF EQUIPMENT OR SYSTEMS DESIGNED BY THE CONTRACTOR. ALL OF THIS REMAINS THE RESPONSIBILITY OF THE CONTRACTOR.

   REVIEW SHALL NOT CONSTITUTE APPROVAL OF SAFETY PRECAUTIONS OR OF ANY CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES.

   APPROVAL OF A SPECIFIC ITEM SHALL NOT INDICATE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT.

2. SHOP DRAWINGS AND/OR PRODUCT DATA FOR THE FOLLOWING ITEMS ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL:

   A. REINFORCING STEEL

   SHOP DRAWINGS ARE TO BE DISTRIBUTED ONLY FROM RETURNED SUBMITTALS BEARING AN INITIALED REVIEW STAMP AND WORK ON THESE ITEMS SHALL NOT PROCEED UNLESS THE STAMP CLEARLY INDICATES THE DRAWINGS ARE "APPROVED" OR "APPROVED AS NOTED."

3. SHOP DRAWINGS AND/OR PRODUCT DATA FOR THE FOLLOWING ITEMS ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. THE ENGINEER'S REVIEW WILL BE LIMITED TO CONFORMANCE WITH DESIGN AND PERFORMANCE CRITERIA SPECIFIED IN THE CONSTRUCTION DOCUMENTS AND THE INTERFACE BETWEEN THESE ITEMS/SYSTEMS AND THE BUILDING STRUCTURE. THIS REVIEW WILL CHECK THE COMPATIBILITY OF LOADS AND POSITIONS OF LOADS IMPARTED ONTO THE BUILDING STRUCTURE, AND COMPATIBILITY OF CONNECTIONS WITH THE BUILDING STRUCTURE. THE MANUFACTURER/ SUPPLIER AND ITS SPECIALTY STRUCTURAL ENGINEER RESPONSIBLE FOR THE DESIGN OF THE ITEM/SYSTEM WILL RETAIN ALL RIGHTS AND RESPONSIBILITIES FOR THE DESIGN OF THE PRODUCT AND THE CONNECTIONS TO THE BUILDING STRUCTURE.

   A. CONCRETE MIXES

   NO WORK ON STRUCTURAL ELEMENTS SUPPORTING OR RELATED TO THESE ITEMS IS TO PROCEED UNLESS THE REVIEW STAMP CLEARLY INDICATES "REVIEWED" OR "REVIEWED, SEE COMMENTS" BY THE STRUCTURAL ENGINEER.

4. CONCRETE IS A PRE-ENGINEERED MATERIAL DESIGNED BY THE SUPPLIER TO MEET THE STRENGTH AND PERFORMANCE CRITERIA SPECIFIED IN THE CONTRACT DOCUMENTS. CONCRETE MIX DESIGNS SHALL BE IN CONFORMANCE WITH ACI 318-14, CHAPTER 5, AND SHALL BE SUBMITTED TO THE INDEPENDENT TESTING LAB WITH APPROPRIATE HISTORICAL TEST DATA AND ANALYSIS FOR REVIEW AND APPROVAL. SUBMIT MIX DESIGNS AND THE TESTING LAB REVIEW TO THE ARCHITECT/ENGINEER FOR REVIEW.

   MANY VARIABLES, INCLUDING MIX COMPONENTS AND ENVIRONMENTAL CONDITIONS AFFECT THE QUALITY OF CONCRETE. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING VARIABLES AND REQUESTING MIX MODIFICATIONS AND SHALL BE SOLELY RESPONSIBLE FOR THE QUALITY OF CONCRETE DELIVERED AND PLACED ON THE SITE.

5. GENERAL CONTRACTOR SHALL PRE-CHECK ALL SHOP DRAWINGS BEFORE SUBMISSION TO THE ENGINEER FOR REVIEW. ALL SUBMITTAL MATERIALS MUST BEAR AN INITIALED REVIEW STAMP OF THE GENERAL CONTRACTOR. SUBMITTALS WITHOUT THE REVIEW STAMP OF THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW AND SHALL NOT BE CAUSE FOR CLAIMS OF DELAY.

6. GENERAL CONTRACTOR SHALL SCHEDULE SUBMITTALS SUFFICIENTLY IN ADVANCE OF THE DATE REQUIRED TO ALLOW REASONABLE TIME FOR DELIVERY, PROCESSING AND REVIEW BY THE DESIGN TEAM. THIS SHALL INCLUDE A MINIMUM OF TEN WORKING DAYS, EXCLUDING DELIVERY TIME, FOR ENGINEER'S PROCESSING AND REVIEW OF SHOP DRAWINGS. INCLUDE TIME FOR CONTRACTOR'S RESUBMISSION AND SUBSEQUENT REVIEW IF NECESSARY.

   SHORTER REVIEW PERIODS WILL ONLY BE HONORED WITH PRIOR WRITTEN CONSENT FROM THE ENGINEER. THESE ACCELERATED SERVICES, AND APPROPRIATE COMPENSATION, MUST BE NEGOTIATED WITH THE ENGINEER AND ARCHITECT IN ADVANCE.

   FIVE DAY REVIEW PERIODS CAN NOT BE HONORED WHEN LARGE QUANTITIES OF SHOP DRAWINGS ARE SUBMITTED AT ONE TIME. WHEN THIS HAPPENS, THE CONTRACTOR SHALL SUBMIT AN ITEMIZED LIST INDICATING PRIORITIES AND REASONABLE RETURN DATES.

7. THE USE OF REPRODUCTIONS OF THESE CONTRACT DRAWINGS, INCLUDING THE USE OF ELECTRONIC FILES, BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF THE INDEPENDENT PREPARATION OF SHOP DRAWINGS, SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON. SUCH USE OF REPRODUCTIONS OF THESE CONTRACT DOCUMENTS WILL NOT BE ALLOWED WITHOUT PRIOR CONSENT FROM THE ENGINEER.

8. WHEN USING ELECTRONIC FORMAT FOR SUBMITTALS, THE CONTRACTOR SHALL PROVIDE ONE PRINTED HARD COPY FOR ENGINEER REVIEW OR EXECUTE AN AGREEMENT FOR REIMBURSING THE ENGINEER FOR PRINTING COSTS FOR ONE COPY.

MODIFICATIONS OF EXISTING STRUCTURE NOTES

1. THE CONTRACTOR SHALL INSPECT THE EXISTING STRUCTURE PRIOR TO FABRICATION AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES WITH THE CONTRACT DOCUMENTS OR ANY AREAS ERODED BY RUST, CORROSION, ROT, ETC., WHICH MAY ADVERSELY AFFECT THE RELIABILITY OF NEW CONSTRUCTION.

2. DIMENSIONS SHOWN FOR, OR TO, THE EXISTING STRUCTURE ARE BASED ON EITHER THE ORIGINAL CONSTRUCTION DOCUMENTS PREPARED FOR THE EXISTING STRUCTURE OR ON APPROXIMATE FIELD MEASUREMENTS. THEY ARE TO BE USED FOR BID PURPOSES ONLY AND NOT FOR SHOP DRAWING PREPARATION OR CONSTRUCTION. ACTUAL CONDITIONS MAY VARY. THE CONTRACTOR SHALL PROVIDE ALL FIELD MEASUREMENTS REQUIRED FOR PROPER FIT UP OF MEMBERS FRAMING TO AND AROUND EXISTING CONSTRUCTION.

3. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE ADEQUACY OF ALL SHORING (TEMPORARY SUPPORTS) OF THE EXISTING STRUCTURE NECESSARY TO COMPLETE THE CONSTRUCTION AS OUTLINED IN THE STRUCTURAL DRAWINGS. PROVIDE SHORING, BRACES, JACKS, ETC. AS REQUIRED TO COMPLETE THE WORK. ENGINEERING AND DESIGN OF THE TEMPORARY SUPPORTS SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER, ENGAGED BY THE CONTRACTOR, AND REGISTERED IN THE STATE OF THE PROJECT, WITH EXPERIENCE IN THE DESIGN OF THESE ELEMENTS.

POST-INSTALLED REBAR AND ANCHORS

THE BELOW PRODUCTS ARE THE DESIGN BASIS FOR THIS PROJECT. PRODUCT DIAMETER AND EMBEDMENT SHALL BE SHOWN IN THE DETAILS. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII). CONTRACTOR SHALL CONTACT MANUFACTURER'S REPRESENTATIVE FOR PRODUCT INSTALLATION TRAINING AND SHALL SUBMIT LETTER TO THE ENGINEER -OF-RECORD (EOR) INDICATING TRAINING HAS TAKEN PLACE. REFER TO THE PROJECT BUILDING CODE AND/OR EVALUATION REPORT FOR SPECIAL INSPECTIONS AND PROOF LOAD REQUIREMENTS. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED BELOW MAY BE SUBMITTED BY THE CONTRACTOR TO THE EOR FOR REVIEW. SUBSTITUTIONS WILL ONLY BE CONSIDERED FOR PRODUCTS HAVING A RESEARCH REPORT RECOGNIZING THE PRODUCT FOR THE APPROPRIATE APPLICATION UNDER THE PROJECT BUILDING CODE. SUBSTITUTION REQUESTS SHALL INCLUDE CALCULATIONS THAT DEMONSTRATE THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE EQUIVALENT PERFORMANCE VALUES OF THE DESIGN BASIS PRODUCT.

UNLESS OTHERWISE NOTED ON THE PLANS, ANCHORS SHALL BE:

1. FOR ANCHORING INTO CONCRETE:

   A. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED CONCRETE. PRE-APPROVED PRODUCTS INCLUDE:

      I. SIMPSON STRONG-TIE "STRONG-BOLT 2" (ICC-ES ESR-3037)
      II. SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713)
      III. SIMPSON STRONG-TIE "STAINLESS STEEL TITEN HD" (IAPMO-UES ER-493)
      IV. HILTI "KWIK BOLT TZ" (ICC-ES ESR-1917)
      V. DEWALT SCREW BOLT + (ICC-ES ESR-3889)
      VI. DEWALT POWER-STUD + SD1 (ICC-ES ESR-2818)

   B. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE RANGE A WITH INSTALLATIONS INTO DRY HOLES DRILLED USING CARBIDE DRILL BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-14 17.8.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-14 17.8.2.4. PRE-APPROVED PRODUCTS INCLUDE:

      I. SIMPSON STRONG-TIE "AT-XP" W/ SPEED CLEAN DXS DUST EXTRACTION SYSTEM (IAPMO-UES ER-263)
      II. SIMPSON STRONG-TIE "SET-XP" W/ SPEED CLEAN DXS DUST EXTRACTION SYSTEM (ICC-ES ESR-2508)
      III. SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4057)
      IV. HILTI "HIT-HY 200 SAFE SET SYSTEM w/ HILTI HIT-Z ROD" (ICC-ES ESR-3187)
      V. HILTI "HIT-HY 200 SAFE SET SYSTEM w/ HILTI HOLLOW DRILL BIT SYSTEM" (ICC-ES ESR-3187)
      VI. HILTI "HIT-RE 500 V3" (ICC-ES ESR-3814)
      VII. DEWALT PURE 110+ EPOXY SYSTEM (ICC-ES ESR-3298)
      VIII. DEWALT PURE 110+ EPOXY SYSTEM (ICC-ES ESR-3298) W/ DEWALT HOLLOW DUST X SYSTEM
      IX. DEWALT AC200+ ACRYLIC ADHESIVE SYSTEM (ICC-ES ESR-4027)
      X. DEWALT AC200+ ACRYLIC ADHESIVE SYSTEM (ICC-ES ESR-4027) W/ DEWALT HOLLOW DUST X SYSTEM

2. FOR ANCHORING INTO MASONRY:

   A. SOLID-GROUTED CONCRETE MASONRY

      I. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC01 OR ICC-ES AC106. PRE-APPROVED PRODUCTS INCLUDE:

         (1) SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-1056)
         (2) SIMPSON STRONG-TIE "STRONG-BOLT 2" (IAPMO-UES ER-240)
         (3) HILTI "KWIK BOLT 3" (ICC-ES ESR-1385)
         (4) DEWALT POWER-STUD + SD1 (ICC-ES ESR-2966)
         (5) DEWALT SCREW-BOLT+ (ICC-ES ESR-4042)

      II. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC58. PRE-APPROVED PRODUCTS INCLUDE:

         (1) SIMPSON STRONG-TIE "AT-XP" (IAPMO-UES ER-281)
         (2) SIMPSON STRONG-TIE "SET-XP" (IAPMO-UES ER-265)
         (3) HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM (ICC-ES ESR 2682)
         (4) DEWALT AC100+GOLD (ICC-ES ESR-3200)

   B. HOLLOW CONCRETE MASONRY

      I. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC106. PRE-APPROVED PRODUCTS INCLUDE:

         (1) SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-1056)

      II. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC58. THE APPROPRIATE SCREEN TUBE SHALL BE USED AS RECOMMENDED BY THE ADHESIVE MANUFACTURER. PRE-APPROVED PRODUCTS INCLUDE:

         (1) SIMPSON STRONG-TIE "SET-XP" (IAPMO-UES ER-265)
         (2) HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM (ICC-ES ESR-2682)
         (3) DEWALT AC100+GOLD (ICC-ES ESR-3200)

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TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NO. DATE DESCRIPTION BY

NONO.

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

GENERAL NOTES

KGSC TRUCK WASH FACILITY PROPOSED IMPROVEMENTS
4108 TODD LANE
AUSTIN, TEXAS 78744

PLOTTED: 11/27/2020
JOB NO: 023-92B

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STATEMENT OF SPECIAL INSPECTION PER IBC 2015, CHAPTER 17

PER 2015 INTERNATIONAL BUILDING CODE, THE FOLLOWING IS A LIST OF THE REQUIRED SPECIAL INSPECTIONS APPLICABLE FOR THIS PROJECT :

2015 IBC SECTION	TYPE OF SPECIAL INSPECTIONS AND EXTENT	APPLICABLE	NON APPLICABLE	NON STRUCTURAL
1705.2	STEEL CONSTRUCTION	☐	■	☐
1705.2.2	COLD-FORMED WELDING INSPECTION	☐	■	☐
1705.2.4	COLD-FORMED STEEL TRUSSES SPANNING 60 FEET OR GREATER	☐	■	☐
1705.3	CONCRETE CONSTRUCTION	■	☐	☐
1705.3.1	REINFORCING STEEL WELDING INSPECTION	☐	■	☐
1705.4	MASONRY CONSTRUCTION	☐	■	☐
1705.5	WOOD CONSTRUCTION	☐	■	☐
1705.6	SOILS	☐	■	☐
1705.7	DRIVEN DEEP FOUNDATIONS	☐	■	☐
1705.8	CAST-IN-PLACE DEEP FOUNDATIONS (PIERS)	☐	■	☐
1705.9	HELICAL PILE FOUNDATIONS	☐	■	☐
1705.11	SPECIAL INSPECTION FOR WIND RESISTANCE	☐	■	☐
1705.12	SPECIAL INSPECTION FOR SEISMIC RESISTANCE	☐	■	☐
1705.13	TESTING FOR SEISMIC RESISTANCE	☐	■	☐
1705.14	SPRAYED FIRE-RESISTANCE MATERIALS	☐	☐	■
1705.15	MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS	☐	☐	■
1705.16	EXTERIOR INSULATION AND FINISH SYSTEMS/ WATER-RESISTIVE BARRIER COATING	☐	☐	■
1705.17	FIRE-RESISTANCE PENETRATIONS AND JOINTS	☐	☐	■
1705.18	SPECIAL INSPECTION FOR SMOKE CONTROL	☐	☐	■
1706	DESIGN STRENGTH OF MATERIALS	☐	■	☐
1707	ALTERNATIVE TEST PROCEDURES	☐	■	☐
1708	IN-SITU LOAD TESTS	☐	■	☐
1709	PRECONSTRUCTION LOAD TESTS	☐	■	☐

ABBREVIATIONS

AB	ANCHOR BOLT	FD	FLOOR DRAIN	PSF	POUNDS PER SQUARE FOOT
ADDL	ADDITIONAL	FDN	FOUNDATION	PROJ	PROJECTION
ADH	ADHESIVE	FIN	FINISH	P/S	PUMP STATION
AFF	ABOVE FINISH FLOOR	FLG	FLANGE	PVC	POLYVINYL CHLORIDE
AL	ALUMINUM	FLR	FLOOR	RD	ROOF DRAIN
ALT	ALTERNATE	FO	FACE OF	REINF	REINFORCEMENT, REINFORCING
ANC	ANCHOR	FRMG	FRAMING	REQD	REQUIRED
APVD	APPROVED	FRP	FIBER REINFORCED POLYMER	RTN	RETURN
ARCH	ARCHITECT, ARCHITECTURAL	FS	FAR SIDE	SBD	SCHEDULED BEAM DEPTH
BC	BOTTOM CHORD	FT	FOOT / FEET	SCHED	SCHEDULE / SCHEDULED
BLDG	BUILDING	FTG	FOOTING	SHT	SHEET
BM	BEAM	GA	GAUGE, GAGE	SIM	SIMILAR
BOC	BOTTOM OF CONCRETE	GALV	GALVANIZED	SLV	SHORT LEG VERTICAL
BOS	BOTTOM OF STEEL	GB	GRADE BEAM	SOG	SLAB ON GRADE
BOT	BOTTOM	GRD	GRADE	SPA	SPACING
BRG	BEARING	GRT	GROUT	SPCS	SPACES
BTWN	BETWEEN	GRTG	GRATING	SPECS	SPECIFICATIONS
CC	CENTER TO CENTER	H	HIGH	SQ	SQUARE
CFM	COLD FORMED METAL	HCA	HEADED CONCRETE ANCHOR	SS	STAINLESS STEEL
CHKD	CHECKERED / CHECKED	HD	HOT DIPPED	SSH	SHORT SLOTTED HOLE
CIP	CAST IN PLACE	HORIZ	HORIZONTAL	STD	STANDARD
CJ	CONSTRUCTION JOINT	HSB	HIGH STRENGTH BOLT	STIFF	STIFFENER
CL, ℄	CENTERLINE	IF	INSIDE FACE	STIR	STIRRUP
CLR	CLEARANCE / CLEAR	IN	INCH(ES)	STL	STEEL
CMU	CONCRETE MASONRY UNIT	JT	JOINT	SYM	SYMMETRICAL
COL(S)	COLUMN(S)	L	LOW	T&B	TOP & BOTTOM
CONC	CONCRETE	LONG	LONGITUDINAL	T/	TOP OF
CONN	CONNECTION	LLH	LONG LEG HORIZONTAL	T/PL	TOP OF PLATE
CONT	CONTINUOUS	LLV	LONG LEG VERTICAL	T/SL	TOP OF SLAB
CTR	CENTER	LSH	LONG SLOTTED HOLE	TC	TOP CHORD
CTRD	CENTERED	MAINT	MAINTENANCE	TD	TRUSS DIAGONAL
DBA	DEFORMED BAR ANCHOR	MAX	MAXIMUM	TEMP	TEMPORARY/TEMPERATURE
DEMO	DEMOLITION	MB	MACHINE BOLT	THK	THICK
DIA, Ø	DIAMETER	MEP	MECHANICAL, ELECTRICAL, & PLUMBING	TO.	TOP OF
DIM	DIMENSION	MECH	MECHANICAL	TOC	TOP OF CONCRETE
DIST	DISTANCE	MFR	MANUFACTURER	TOF	TOP OF FOOTING
DN	DOWN	MIN	MINIMUM	TOG	TOP OF GRATING
DP	DEEP	MTL	METAL	TOS	TOP OF SLAB / STEEL
DS	DRILLED SHAFT	NOM	NOMINAL	TOW	TOP OF WALL
DWG	DRAWING	NS	NEAR SIDE	TRANS	TRANSVERSE
EA	EACH	NTS	NOT TO SCALE	TV	TRUSS VERTICAL
ECS	EPOXY COATED STEEL	OC	ON CENTER	TYP	TYPICAL
EE	EACH END	OD	OUTSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
EF	EACH FACE	OF	OUTSIDE FACE	UT	ULTRASONIC TESTING
EJ	EXPANSION JOINT	O/O	OUT TO OUT	VERT	VERTICAL
EL, ELEV	ELEVATION / ELEVATOR	OPNG	OPENING	VIF	VERIFY IN FIELD
EOR	ENGINEER OF RECORD	OPP	OPPOSITE	W	WIDE
EQ	EQUAL	OSH	OVERSIZED HOLE	W/ w/	WITH
EQUIP	EQUIPMENT	PC	PRECAST	WP	WORK POINT
EQUIV	EQUIVALENT	PEMB	PRE-ENGINEERED METAL BUILDING	WS	WATERSTOP
ES	EACH SIDE	PGL	PROFILE GRADE LINE	WWF	WELDED WIRE FABRIC
EW	EACH WAY	PJF	PREMOLDED JOINT FILLER		
EXP	EXPANSION	PL, ℄	PLATE		
EXIST	EXISTING	PLF	POUNDS PER LINEAR FOOT		

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NO.	DATE	DESCRIPTION	BY

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

SPECIAL INSPECTION AND ABBREVIATIONS

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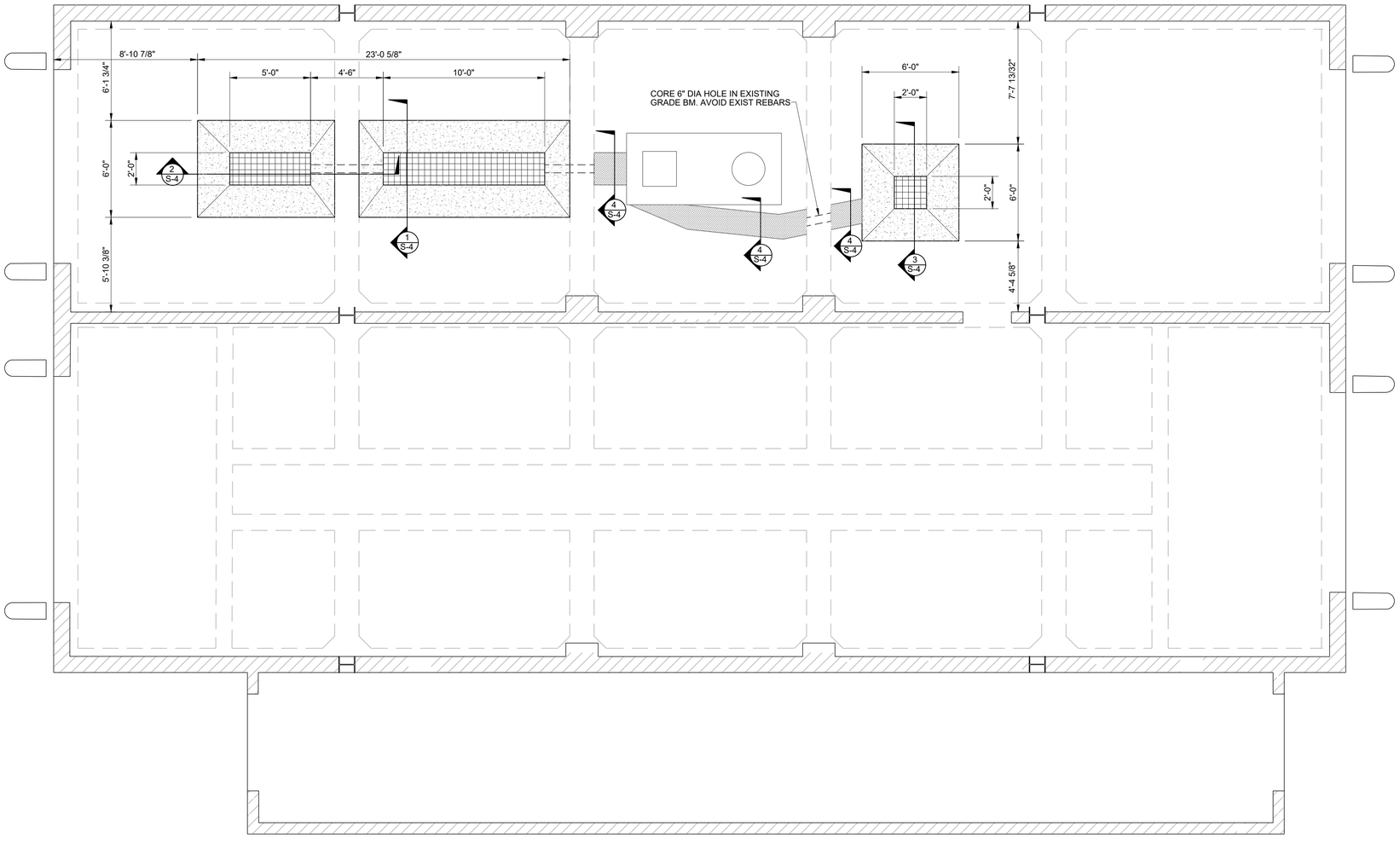
S-2



1 NEW TRENCH AND SUMP PIT PLAN IN EXISTING FOUNDATION

SCALE : 1/4" = 1'-0"

NOTE :
1. REFER TO ARCH DRAWINGS FOR TOP OF SLAB ELEVATIONS

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		90% DESIGN DOCUMENTS 11/13/2020	

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NEW TRENCH AND SUMP PIT PLAN IN EXISTING FOUNDATION

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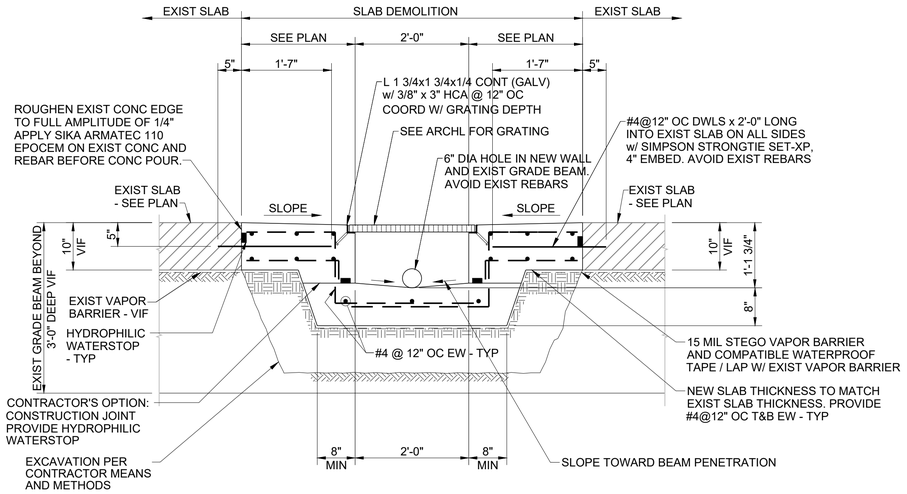
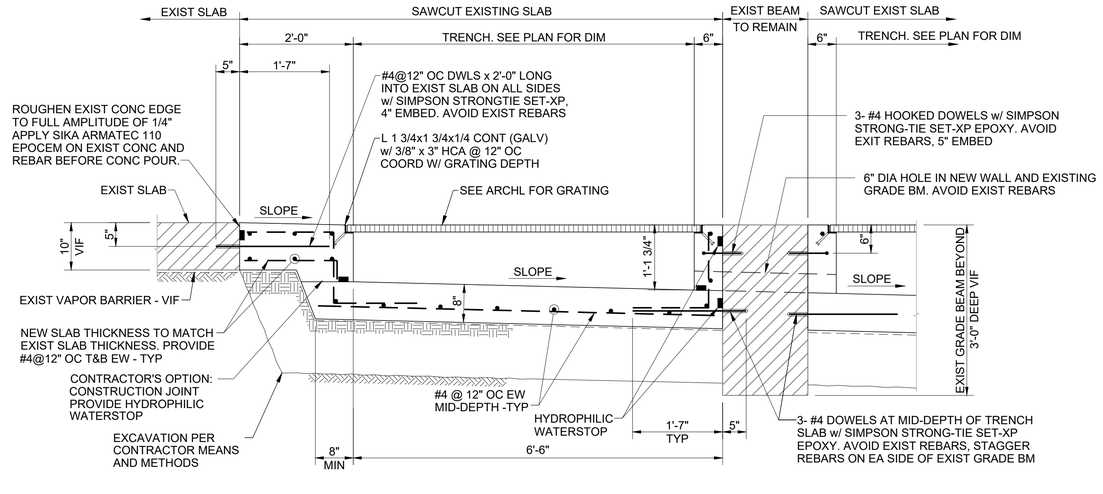
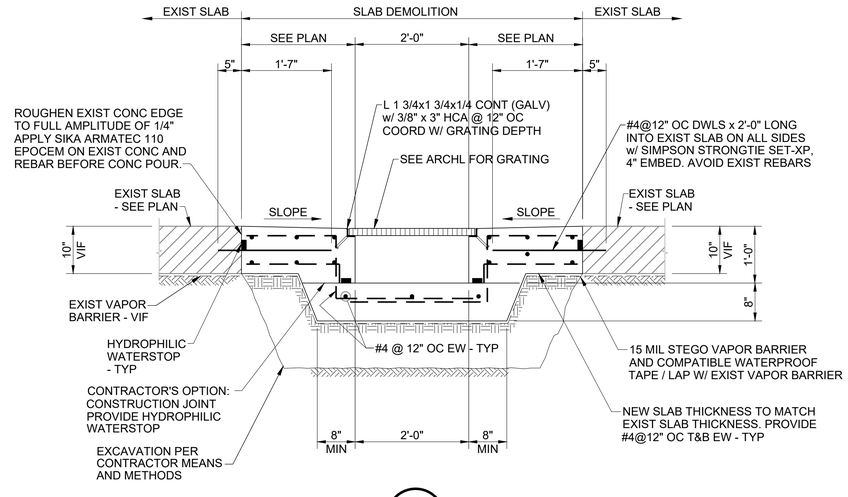


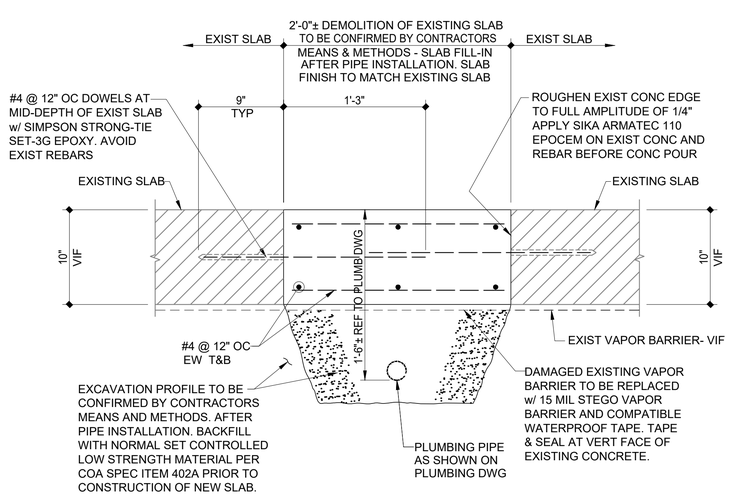
1 3/4" = 1'-0"



2 3/4" = 1'-0"



3 3/4" = 1'-0"



4 1 1/2" = 1'-0"

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CONCRETE DETAILS

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